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An Address.[1]

By PAUL HOPKINS,
Mackay.

President of the Queensland Branch of the British Medical Association.

IN the first place, may I thank you for the honour you have done me in electing me as your President for the ensuing year? It is an added pleasure to realize that my father was President of this branch in 1903.

In accepting nomination to be your President, I realize that this appointment must, to some extent, be experimental. I live and practise about 600 miles from Brisbane and I am in active general practice. I will need the help which has been so generously offered by our Immediate Past President and by the Chairman of Council. If I fail, I can only assure you that it will not be for the want of trying.

These thoughts bring my mind to compare medical practice in my father's day with my early days and with today. This is the centenary year for Queensland, and while I cannot go back for 100 years, I can go back for 97 years, as my father was born in 1862. I know something of medicine in my father's day from the tales he used to tell. He studied at University College in London. He lived in lodgings with two other medical students, and they took it in turns to buy candles by which to study. One of these three students was Jimmy Mayne, the Dr. Mayne who left this site to the University of Queensland.

Names my father used to mention amongst his teachers were those of Sir Victor Horsley, Jonathon Hutchinson and Sir John Williams, who confined Queen Victoria, and who used to say that if he had a baby nobody would get him out of bed under three weeks—shades of early ambulation! As my father was in London during Lister's time, he had a clear understanding of asepsis and antisepsis. Later, when he was a resident medical officer at the Royal Infirmary at Liverpool, Sir Robert Jones was an honorary there. My father qualified in medicine in 1888, and got his Fellowship of the Royal College of Surgeons of England in 1892. He used to tell this story of the early days of the telephone. While in practice with my uncle in Swansea in Wales, he was called out at 2 a.m., when it was bitterly cold and snowing. On his arrival, the lady of the house remarked: "What a godsend the telephone is, doctor, I couldn't possibly have sent out a servant on a night like this." He claimed to have given during this time the first injection of diphtheria antitoxin used in Swansea. In those days most bedrooms had an ottoman couch at the foot of the bed, and, when called to a confinement, my father would sleep on this until his services were required.

[1] Delivered at the annual meeting of the Queensland Branch of the British Medical Association on September 12, 1959.

He arrived in Brisbane in 1896, travelling in the same ship as Lord Lamington, who was to be the new Governor of Queensland.

One of his stories of early Brisbane concerned a certain sea captain with high blood pressure and its consequences. He and his wife used to live on a hill at Rosalie, where my father visited them every week. When he was expected, a maid was stationed in a small tower in the roof, and when she saw the sulky pass a certain spot she would rush down and put on a cheese soufflé, which my father would have, with a small bottle of champagne, before he examined the patient. I have never been able to find a patient like that.

In those days the pace was leisurely, and the horse and buggy were used for many years. Quite early in the century my father bought a motor-car, an "Oldsmobile", shaped like an American buggy, steered by a tiller-like handle, and having a starting handle at the side and the engine at the back. Was this the first car in Brisbane? We thought it was. In a few years we got a new car. It had a bonnet, was steered with a wheel and had the gear change on the steering column. It was a 1905 "Darracq", a model one year later than the now famous "Genevieve". This car ran for a number of years, until one day my father went out in it and it broke down. He came home in a horse-drawn buggy, and remained faithful to the horse and buggy till the end.

My father was a keen student of anatomy, and always referred to pathology as "morbid anatomy". It is one of my happiest memories that I managed first-class honours in anatomy shortly before he died—it gave him so much pleasure. At that time the doctor had little help and relied on clinical acumen and observation. I awakened one day with a very painful hip joint. I can remember the consultation between Dr. Jackson, Dr. Glynn Connolly, Dr. Jefferis Turner and my father. Did I have a tuberculous hip? Time decided in my favour, as radiology was not available. I well remember my father quoting an English saying: "When operating for stone, always have one in your waistcoat pocket." The diagnosis of calculus without the aid of X rays to me savours of trying to pick the winner of the 3.30.

Laboratory facilities were readily available. The Bacteriological Institute was in a two-storied, red-painted brick building next to the Grammar School, on the Countess Street side—now, I believe, the Correspondence School. This institute was run by a man named Pound. He was a scientist, not a doctor, and, if I remember rightly, well built and fairish with a cheerful disposition. He always seemed to be there, and Saturdays and Sundays were a common time to call. He was held in high esteem by the medical profession; he helped to investigate epidemics, and did cultures for diphtheria and typhoid and other pathological work, such as making tissue sections, as well. This institute moved to Hope Street, South Brisbane, for a time, and eventually moved to William Street, to become the present State Health Laboratory. The Brisbane General Hospital was well established when my father arrived in Brisbane. It was already a very efficiently run hospital, with Dr. Sandford Jackson as superintendent. Dr. Jackson was followed by Dr. Mayne, who in turn was followed by Dr. Maclean; he held the position for many years.

I can just remember calling at the Mater Private Hospital, which was on North Quay, near where the Grey Street Bridge now stands. We paid many visits to the site of the new Mater while it was being built (on the present site). By the time it was opened we had returned to horse and buggy, and I was horse-holder-in-chief at week-ends; while my father was examining a patient, the gardner would come and hold the horse, and a small boy was taken inside to be fed on lemonade, cakes and many other delicacies.

Another private hospital was the "Alexandra", situated in Stanley Street going towards St. Helen's, on the left-hand side of the street. It looked quite a big, imposing place, but I was never inside it; there were no cakes and ale here.

St. Helen's, of course, was in the same place as it is now. It was owned and run by Dr. Sandford Jackson, My father and Dr. Jackson worked together for some years, giving each other's anæsthetics, assisting each other and consulting together. The matron, for many years, was Mrs. Marshall, and the head nurse, Nurse Campbell, was a very efficient nurse and a very nice person. I saw quite a bit of the inside of St. Helen's.

Patients with growths of any kind used to present very late in those days, being afraid to be told that it was cancer. Surgery was limited in its scope, and there was no X-ray therapy, although radium was being used to a limited extent. It was only after the cancer campaign of 30 years ago that the public realized the value of presenting any lumps for early diagnosis. The cancer campaign was organized in about 1930, to give authoritative information to the public about cancer. Its particular aims were to stress the importance of early diagnosis and treatment, to collect money for research and to install new methods of treatment. This campaign was Australia-wide, and brought about a very noticeable improvement in the attitude of patients to this condition.

The common diseases of those days included infectious diseases, pneumonia, diphtheria, typhoid, indefinite fevers, rheumatic fever, Bright's disease, heart conditions, diabetes and tuberculosis. To combat these there was a very limited number of drugs, most of which were not very effective, so the doctor was mostly left with a stout heart, morphine and good nursing, the last-mentioned being by far the most important. It is no wonder my father used to say: "It is the doctor's duty to amuse the patient while nature effects a cure."

Surgically, my father was interested in biliary surgery, drainage only, and in the appendix, after the famous operation on King Edward VII. Excision of the tongue was done occasionally and, with open methods of anæsthesia, must have been hazardous indeed; but the patients seemed mostly to survive. Removal of goitres was another operation he used to do. My father's associates at that time were Dr. Jackson, Dr. Glynn Connolly, Dr. Hawkes, Dr. Hirschfeld, Dr. Lockhart Gibson, Dr. Sutton, Dr. W. N. Robertson, Dr. David Hardie, Dr. Brockway, Dr. Thompson, Dr. Marks, Dr. Carvosso, Dr. Espie Dodds, Dr. Jefferis Turner, and many others not readily called to mind.

No reference to early medicine in Queensland would be complete without mention of the work of Dr. Bancroft. His work was done before my father arrived in Brisbane, and shows that the standard of medical practice in those days was high. To those who are not familiar with Dr. Bancroft's work, I would say that his discoveries and work with filaria, using a brilliant intellect, a microscope and little else, place him amongst the immortals.

In dealing with things that are past, especially scientific things, we are inclined to regard them as archaic. Over the last few years it has been my privilege to study a book called "The Principles of Surgery" by John Bell, in two volumes published in 1801 and 1806 respectively, and I have been amazed at the things they used to do. One particular feature was Bell's discourse on the pathology of the healing of fractures in which, in effect, he postulates the modern theory.

In about 1728, Chesselden devised his lateral operation for cutting for stone. With no anæsthetic, no knowledge of asepsis or antisepsis, how many of us would care to try to do this operation in one minute, with less than 10% mortality? How many of us could do what Sir James Mackenzie did with his stethoscope alone?

Let us be truly thankful that we belong to an age which has produced "wonder drugs" that work wonders, methods of diagnosis such as the cardiograph, modern radiology and all the scientific aids we have today, and that we do not have to work "by guess and by God".

At the age of 15 years I attended a post-mortem examination on a subject who had died from a perforated typhoid ulcer, and I also attended many operations. I did my first

year in Brisbane in 1919, and then I went to Melbourne, as there was no medical school in Brisbane at that time. We had a very imposing array of teachers in Melbourne, with a particularly brilliant team of young men just back from the war. The advances on my father's day were many. Dr. Wilkinson, the diabetic specialist, was trying out the first batches of insulin to arrive in Melbourne, and we were privileged to see the first Victorian to recover from the oblivion of diabetic coma.

Sir James Mackenzie and Sir Thomas Lewis had published their work, and cardiology had received a tremendous stimulus. Conditions which had been wrapped in mystery to my father were clear and understandable to us. Electrocardiographs were in use, but the apparatus was cumbersome and difficult to operate. In pneumonia, oxygen was freely used, and leeches were used in the early stages. These leeches were kept in a tin in "Casualty", and much fun and games were had by the residents in transferring them from the tin to the patient. Typhoid was treated with vaccines, which shortened the course of the disease—and also, by the severity of the reactions which occurred, the life of the resident.

Radiology was readily available. The Bucky diaphragm was a fairly recent invention, which improved the quality of the pictures considerably. A popular X-ray machine was the "Victor Snook". This was used for therapy as well as radiography, but it was not very powerful for therapy. Radium was freely used and readily available, but not in very large quantities.

The battle of the gall-bladder was raging, the young men advocating its removal and the older "die-hards" advocating drainage. I can still hear the opening argument of all the "die-hards". "Gentlemen, the gall-bladder has a function to perform." The battle was almost over when I left the hospital, with only the very oldest hands still employing drainage.

The Walter and Eliza Hall Pathology Department, which was the Melbourne Hospital pathology department, was doing a wide variety of tests. Dr. C. H. Kellaway was its head, and was just starting to show an interest in snake-bite antivenene. At that time a very keen worker in that institution was Sir Macfarlane Burnet.

Anæsthesia received a great stimulus by the use of ether machines, and the intratracheal catheter opened up surgery of the mouth, nose and throat. Nitrous oxide and oxygen mixture was available as an anæsthetic, without relaxants. "Novocain" replaced cocaine and, because of its safety, became widely used as a local anæsthetic.

Blood transfusion was common, but not to the extent that it is today. At the Melbourne Hospital the residents did all the grouping and cross-matching, the taking and the giving of the blood, the pathology department taking no part unless specially asked to do so. The donors were relatives and friends, who were lined up and tested on the spot. What a time we had with the rare groups! The poor souls had to search the highways and byways for relatives and friends. The testing went on until a donor was found. I will not go into technical details, but the blood was taken and given through glass cannulas, many of which we made ourselves. For many years in Mackay I made mine over a gas ring, until the "Soluvac" equipment became available.

After one year at the Melbourne Hospital I was appointed superintendent of the Mackay District Hospital. My troubles may help to give you some idea of the problems faced by many country practitioners during that period. I arrived in Mackay to find myself in sole charge of a hospital with a daily average of over fifty in-patients. Doctors from town would give anæsthetics, for which they were paid, but as they were not always available, many times I would induce anæsthesia and hand over to the matron, scrub up and do the operation. Matron was a good and careful anæsthetist, and we had no mishaps. After several months I strongly advocated the appointment of another doctor, and shortly afterwards Dr. John Morris arrived. Although most of the equipment at the hospital was quite good, the X-ray machine was a museum piece, very much in the tradition of Heath Robinson. It was a coil spark-gap machine with gas tubes. I had never seen an X-ray machine in action, and after only a quick run-through with my predecessor, I was left with the yardman as my only helper. Fortunately he was quite adept. The machine had a terrifying habit of producing about an eight-inch spark like lightning, together with a deafening noise. This would always happen when we were trying to get a bit extra out of the machine. I never did discover who got the bigger fright, the patient or myself. By the end of my term at the hospital I had mastered it, and we took retrograde pyelograms, and made the simpler bismuth meal X-ray examinations.

There was no pathology department, so I used to do my own tests. I did bacteriological staining, urea concentration tests, blood urea level tests, and an occasional tissue section, but other pathological work had to be sent to Townsville or Rockhampton, each over 200 miles away. The dispensing was done by a sister, and in any difficulty we were called in; but as we wrote the prescriptions, we could alter them according to our pharmaceutical capacity.

One of the problems that faced me when I settled into private practice in 1928 was that of keeping myself up to date. I took a selected number of journals, and these helped, together with monographs, new publications and occasional text-books. I attended post-graduate meetings, but these were few, as *locum tenentes* were difficult to get. Most of my post-graduate work was done while I was on holidays, when I used to spend my time at the various hospitals, being very trying to my friends, who were patient in helping me to renovate my clinical work and in giving me the latest information on new methods.

Amongst the new advances in the 1930's was the improvement in the apparatus and technique of blood transfusion, and in the intravenous use of various fluids. This out resuscitation on a sound basis, the variety and simplicity of "Soluvac" apparatus being invaluable. Some of the State Health Department research medical officers carried out a magnificent project in sorting out all the vague fevers of the north into their proper categories. To us in the north of Queensland this was invaluable. In 1940 a laboratory was opened in Mackay, and since then the facilities have increased and improved.

In the early 1920's a Presbyterian minister, John Flynn, had a magnificent vision, and, being essentially a practical man, he pursued his vision till it became an accomplished fact. In 1928 the present Royal Flying Doctor Service was born. Its principle was to take medical attention to the individual in the far outback. A fascinating and reasonably simple wireless device was produced to call the doctor, and his aircraft was so fitted that he could take his patient back to hospital if necessary. This service has progressed and grown until the far-away areas are a network, serviced by the Flying Doctor. It is a unique idea and must be a great source of comfort to the people of these areas. The Queensland Government has started another service of a similar type. A flying surgical team is available to fly to any area to take over serious surgical emergencies. This will be a great help to the solitary outback doctor, who has been very much alone.

A drug called "Prontosil" was introduced just before the war. This drug was the first of the sulphonamide drugs, and these opened a new era in medical treatment. We started the war with the "sulpha" drugs rapidly increasing in type—a new one appeared every few months, working wonders with pneumonia, cerebro-spinal meningitis, and all types of infection. In the war areas dysentery was a serious problem until sulphaguanidine became available. Towards the end of the war, penicillin became available in limited quantities, and from then on innumerable antibiotic drugs have come forward. Today they are legion, and are working miracles. The bacteriologists, pathologists and physicians have repeatedly warned us against the too-free use of these drugs, owing to the development of resistance on the part of the germ and sensitivity on the part of the patient. This poses the question: "Will resistance on the part of the germ eventu-

ally render all antibiotic drugs impotent?" This is a very real problem, about which much has been said. We must all realize the full extent of the danger, and band together to meet it. The general practitioner in particular, seeing, as he does, so many minor illnesses, must sternly resist the temptation to use a steam hammer to crack a nut and produce a miracle.

Protection against the various infectious conditions by immunization has become commonplace, and many of these, such as diphtheria and whooping-cough, have been almost wiped out. Tuberculosis, from being one of our great scourges, is now being brought under control. Isotopes, deep X-ray therapy and other radioactive substances, with the exception of radium itself, were unknown in my father's day and in my early days. These have contributed much to our knowledge of physiology, and are taking a rapidly increasing part in treatment.

These scientific advances, together with the improvements of modern travel, which have linked the widely separated areas of our vast State, and especially, a marked increase in the number and efficiency of hospitals throughout Queensland, have helped to raise the standard of treatment of patients, and have certainly eased some of the burden carried by country doctors. Throughout the world, a very large number of research workers are seeking the answer to our many medical problems, and the answers are coming thick and fast. Many of these are highly technical and necessitate a very high degree of technical specialization in some phases of medicine. It is interesting to record that a fellow student once remarked to me that "it is a pity that there is nothing left to discover in medicine". He looked staggered when I told him that I thought the surface had not yet been scratched.

I have tried to give you a picture of a fascinating period of medicine. I hope it has been understandable to the lay members of the audience. Looking back, I feel that the medical profession can be justly proud of its contribution to Queensland's first hundred years. In conclusion, may I give you a prayer from a great man of our profession, Sir Robert Hutchinson:

> From inability to let well alone; from too much zeal for the new, and contempt for what is old; from putting knowledge before wisdom, science before art, cleverness before common sense; from treating patients as cases; and from making the cure of the disease more grievous than the endurance of the same, Good Lord deliver us.

THE EFFECT OF A NEW ANTICHOLINERGIC AGENT, OXYPHENCYCLIMINE HYDROCHLORIDE,[1] ON GASTRIC SECRETION.

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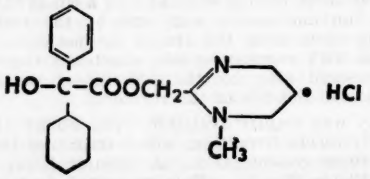
THE large number of anticholinergic drugs available for the treatment of peptic ulcer suggests that the ideal drug has not yet been found. In fact, no drug has been demonstrated to have an anti-secretory effect on the stomach superior to atropine (Lieber, 1956), or a selective action on any part of the gastro-intestinal tract (Bachrach, 1958). One variable in the action of drugs is their duration. The anticholinergic drugs commonly used have a duration of action of four to six hours, and with this short total duration of action, relatively severe side effects must be present at the time of maximal activity if inhibition of secretion is to be achieved over 24 hours on three or four doses per day. Because of this, the anticholinergic drug oxyphencyclimine hydrochloride ("Daricon") appeared to have advantages over the more commonly used preparations. Preliminary reports on this drug suggested that it produced considerable inhibition of secretion for at least 12 hours. As prolonged depression of secretion would be advantageous in the control of both day and night secretion, a study was made of the effects of this drug on gastric secretion.

PHARMACOLOGY.

Oxyphencyclimine hydrochloride is a non-quarternized tertiary amine compound with the following chemical structure:



In laboratory studies using Shay rats, its anti-secretory activity exceeded that of atropine and propantheline. In dogs with gastric fistulæ, it completely abolished spontaneous and broth-induced gastric free acid. In animals, anti-secretory doses did not significantly influence normal intestinal motility, and doses that suppressed salivation were approximately four times the effective anti-secretory dose. It appeared to possess minimal ganglion-blocking or curare-like activity (Finkelstein *et alii*, 1959).

The present study concerns the effect of oxyphencyclimine on gastric secretion as stimulated by a meal and by hypoglycæmia. Also, the duration of activity was assessed by its action on salivary secretion.

METHOD.

The Effect of Oxyphencyclimine on Gastric Secretory Response to a Sucrose Meal.

The 12 subjects studied included two with peptic ulcers, five students and a group of patients who were in hospital with diseases not affecting the gastro-intestinal tract.

The technique of Hunt (1954) was used. This method involved giving the fasting subjects a sucrose meal containing phenol red. Saliva was obtained by means of a salivary aspirator, and measured. At the end of 30 minutes the gastric contents were aspirated and analysed for acid, chloride and pepsin, and the pH was determined. All side effects were noted and the vision was tested with Snellen's type. From the results, the gastric secretory output during the 30 minutes can be determined. The parietal and non-parietal components were calculated from the formulæ of Fisher and Hunt (1950). The test was carried out at least twice on each patient—once as a control experiment, and once after the administration of oxyphencyclimine. The oxyphencyclimine was given in a dosage of 25 mg. nine hours before the commencement of the test.

Effect of Oxyphencyclimine on Gastric Secretory Response to Hypoglycæmia.

The patients studied were psychiatric patients having insulin coma therapy. Insulin in a dosage of 200 to 700 units was given at 6.30 to 6.45 a.m., after the patient had fasted during the previous night. A Cleland tube was passed and continuous suction was applied. Initially, a study was made of the effect of prolonged hypoglycæmia on gastric secretion, and the secretion during the hour in coma was considered the most suitable parameter to measure. The study was made on the output during the second 30 minutes of the hour spent in coma. Blood sugar levels were estimated at least three times during the coma, and values dropped to below 50 mg. per 100 ml., and usually to 20 to 30 mg. per 100 ml.

[1] "Daricon" (Pfizer).

TABLE I.

Effect of Oxyphencyclimine on Meal-Stimulated Secretion: Output During 30 Minutes after Meal.

Subject.	Acid Output. (mEq.)	Pepsin Output. (Mg.)	Parietal Cell Secretion. (Ml.)	Non-Parietal Cell Secretion. (Ml.)	Saliva. (Ml.)	pH.
I: Control	6·35	828	53·9	50·4	14	2·2
After drug	2·61	569	28·8	44·3	4	3·1
II: Control	4·47	272	36·8	25·3	10	2·3
After drug	0·95	148	8·3	8·4	10	3·0
III: Control	8·79	364	59·8	17·0	90	2·2
After drug	2·16	185	18·7	18·5	19	2·7
IV: Control	19·32	594	132·1	40·1	50	2·0
After drug	5·05	329	38·3	23·8	20	2·2
V: Control	5·43	420	39·9	21·2	2	2·3
After drug	0·31	50	13·1	39·8	5	6·6
VI: Control	3·06	499	27·9	31·1	19	3·4
After drug	5·00	433	36·3	18·0	2	2·3
VII: Control	8·41	265	60·4	27·9	62	2·0
After drug	5·86	366	39·9	11·6	14	2·3
VIII: Control	1·43	294	17·4	30·0	8	3·0
After drug	4·03	246	31·1	21·1	2	2·4
IX: Control	1·38	43	16·6	28·2	29	2·8
After drug	1·30	37	17·5	33·2	15	3·3
X: Control	6·05	241	44·5	23·5	22	2·1
After drug	5·03	256	40·0	17·2	7	2·3
XI: Control	5·12	482	42·3	36·5	13	2·4
After drug	1·06	193	11·1	15·8	2	3·1
XII: Control	0	131	5·1	18·1	15	6·8
After drug	0·80	72	8·1	11·0	6	3·2
Mean:[1] Controls	5·8±5·0	361±65	44·7±9·4	29·1±3·0	28±7	
After drug	2·9±2·1	240±45	24·3±3·7	21·9±3·3	9±2	
Difference between means	2·9	121	20·4	7·2	19	
Significance (*P*)	0·1	0·2	0·05	0·1	0·02	

Each patient was studied on a number of occasions in the control experiments. On other occasions the patients were given oxyphencyclimine nine to ten hours before the specimen of gastric juice was collected, or probantheline two and a half hours before its collection, or atropine (one-fiftieth of a grain subcutaneously) half an hour before its collection. The control experiments and the studies after drugs had been given were randomized.

The Effect of Oxyphencyclimine on Salivary Flow.

The salivary flow was measured by the patient's expectorating all saliva while chewing gum for 10 minutes. Three control readings were taken and the drug was given. Subsequently, salivary flow was measured hourly until the flow returned to normal. Readings were not taken within 30 minutes of a meal.

RESULTS.

Effect of Oxyphencyclimine on Meal-Stimulated Secretion.

The results are given in Tables I and II. It will be seen that, though the output and concentration of all components of gastric secretion were reduced nine hours after the drug had been given, it was only in respect of the parietal cell component and the acid concentration that this reduction was significant at the 5% level. The relatively small response may be due to the great variation from patient to patient, which masked any over-all change due to the drug. Alternatively, the anticholinergic activity remaining at this interval may not have been sufficient to inhibit the secretory stimulus provided by the meal. Eleven of the 12 patients had side reactions at the time of the test; in none was any change in visual acuity detected with the Snellen's type.

Effect of Oxyphencyclimine on Hypoglycæmia-Stimulated Secretion.

Effect on the Rate of Acid, Pepsin, Parietal-Cell and Non-Parietal-Cell Output.

This is shown in Table III. The mean control output per patient has been expressed as 100%, and the output after a series of anticholinergic drugs as a percentage of this. The standard error of the mean is given whenever the numbers of observations permitted this calculation.

[1] The second figure in each case is the standard error of the mean.

It will be seen that the response of acid secretion, pepsin secretion and parietal and non-parietal secretion is depressed. The inhibition after 25 mg. of oxyphencyclimine and 30 mg. of propantheline had been given was highly significant ($P < 0{\cdot}01$).

TABLE II.

Effect of Oxyphencyclimine on Meal-Stimulated Secretion: Concentration of Acid and Pepsin 30 Minutes after a Meal.

Subject.	Acid (mEq/l.).		Pepsin (Mg. per 100 ml.)	
	Control.	After Drug.	Control.	After Drug.
Patient I	11·5	4·4	150	96
Patient II	12·5	2·2	72	34
Patient III	13·5	3·3	56	28
Patient IV	26·0	9·2	80	60
Patient V	9·8	0·5	76	8
Patient VI	5·6	8·7	90	76
Patient VII	12·0	8·8	48	40
Patient VIII	3·4	9·2	70	56
Patient IX	3·2	3·0	10	9
Patient X	10·2	2·2	96	40
Patient XI	14·6	9·6	46	60
Patient XII	0	2·0	9	18
Mean[1]	10·2±2·0	5·3±3·5	67±11	44±8
Difference between means	4·9		23	
Significance (*P*)	0·05		0·1	

[1] The " ± " figure is the standard error of the mean.

The acid and parietal-cell components were depressed to a greater extent than the non-parietal-cell components and the pepsin secretion. Twenty-five milligrammes of oxyphencyclimine had approximately the same inhibiting reaction after nine to ten hours as did 30 mg. of propantheline administered two and a half hours previously.

Effect of Oxyphencyclimine on the Concentration of Acid and Pepsin.

The mean concentration of the control specimens was expressed as 100%, and the concentration after the administration of anticholinergic drugs as a percentage of this. The effect of the three anticholinergic drugs studied is given in Table IV. The standard error of the mean is

given whenever the number of observations permitted this calculation to be made.

Two facts of importance are shown by Table IV. Firstly, though the acid concentration dropped after the administration of all anticholinergic drugs, it is significantly decreased only after 25 mg. of oxyphencyclimine ($P < 0.01$). Secondly, with increasing anticholinergic suppression of secretion, the concentration of pepsin rose, and over the whole series the increased pepsin concentration produced by the anticholinergic drugs is statistically significant ($P = 0.05$). It is considered that pepsin is secreted in a very small volume (Linde, 1950), and the rise in pepsin concentration is no doubt due to the fact that pepsin is inhibited to a lesser extent than acid and volume output by anticholinergic drugs.

Effect of Oxyphencyclimine on Saliva Flow.

Time of Onset of Antisialagogue Effect.

The time of maximum effect was usually one hour after the ingestion of the drug. There was no significant difference between the time of maximum effect of oxyphencyclimine and propantheline ($P = 0.5$) (Table V). On comparison of the antisialagogue effects, it is found that

TABLE III.

Comparison of Anticholinergic Drugs on Output of Gastric Secretion after Hypoglycæmia.

	Number of Observations.	Acid.	Parietal Component.	Non-Parietal Component.	Pepsin.
Control.	12	100±3	100±3	100±11	100±5
Oxyphencyclimine:					
12·5 mg. ..	1	58	59	88	104
25 mg. ..	9	36±7	37±7	53±7	47±8
37·5 mg. ..	3	34	39	91	81
50 mg. ..	1	17	19	72	56
Propantheline, 30 mg. ..	8	38±9	38±9	38±6	49±6
Atropine, 1/50 grain ..	2	33	36	74	64
All anticholinergic drugs	24	37±4	37±4	52±5	54±5

20 mg. of oxyphencyclimine inhibited secretion to 36% of normal, whereas 30 mg. of propantheline reduced secretion to 56% of normal. It can be calculated also that at the time of maximal action, 15 mg. of propantheline are approximately equivalent to 6 mg. of oxyphencyclimine.

Duration of Action.

The duration of action of oxyphencyclimine and propantheline is shown in Table V. These results indicate that in the dosages used there was no significant difference between the two drugs in the extent of maximal depression or in the duration of 50% depression. The increased duration of 20% inhibition after the administration of oxyphencyclimine was highly significant ($P < 0.01$).

To compare adequately the relative duration of effect of two drugs, the dose must be such that the maximal effects are equal, and the time taken to return to various levels can then be accurately compared. This was done in two instances; the results can be seen by comparing the response of Subject XV after 75 mg. of propantheline and 30 mg. of oxyphencyclimine, and of Subject XIII after 45 mg. of propantheline and 20 mg. of oxyphencyclimine. These show well the increased duration of action of oxyphencyclimine when compared with an equivalent dose of propantheline.

It will be recalled that, when the effect is assessed with regard to inhibition of hypoglycæmia-stimulated secretion, that of 25 mg. of oxyphencyclimine administered nine and a half hours previously was approximately equivalent to that of 30 mg. of propantheline administered two and a half hours previously. It is necessary to compare the effect of a similar dose on salivary flow after the same intervals of time. This comparison is given in Table VI (the dose of oxyphencyclimine used was 20 mg. in this case, owing to change in size of the manufacturer's tablets).

It is seen that the results are not significantly different, the inhibition after the administration of 20 mg. of oxyphencyclimine being larger than that after 30 mg. of propantheline had been given. This suggests that, on the basis of the effect on saliva flow, 25 mg. of oxyphencyclimine and 30 mg. of propantheline are approximately equal at these intervals, as was the effect of these doses on hypoglycæmia-stimulated gastric secretion after similar periods of time.

DISCUSSION.

The ideal anticholinergic drug for the control of gastric secretion is one that will inhibit basal and vagal and meal-stimulated phases of gastric secretion without generalized depression of parasympathetic activity. Assessment of drugs based on basal secretion has the disadvantages that basal secretion is small in volume, varies from day to

TABLE IV.

Effect of Anticholinergic Drugs on Concentration of Acid, Chloride and Pepsin.

	Number of Observations.	Acid.	Chloride.	Pepsin.
Mean.	12	100±3	100±1	100±7
Oxyphencyclimine:				
12·5 mg. ..	1	100	109	173
25·0 mg. ..	9	74±8	91±3	107±19
37·5 mg. ..	3	65	91	162
50·0 mg. ..	1	59	90	205
Propantheline, 30·0 mg.	8	82±10	96±3	118±20
Atropine, 1/50 grain	2	69	93	146
All anticholinergic drugs	24	74±6	93±3	133±14

day, and in man is the predominant secretion only during sleep. The inhibition of food-stimulated secretion is of importance because of its magnitude, and because ulcer symptoms usually occur one to two hours after eating. Their effect on the response to a meal is complicated by the fact that hormonal as well as nervous factors play a part in this phase (Woodward *et alii*, 1954), and unless gastric emptying is considered, the secretory response is impossible to determine. The inhibiting effect of anticholinergic drugs on vagus-stimulated secretion would be expected to yield the best quantitative assessment of their efficiency. In relation to peptic ulcer, it is the aim of therapy to maintain the pH above 5·0, to maintain this depression as constant as is pharmacologically possible, and to inhibit both acid and pepsin secretion.

Any anticholinergic drug given in adequate dosage will depress basal secretion (Avey *et alii*, 1950; Berkowitz, 1956; Gill and Jessup, 1950; Kasich, Boleman and Rofsky, 1956; Lorber and Shay, 1951; Smith *et alii*, 1950). Its effect on meal-stimulated secretion has usually shown no consistent inhibitory action (Winkelstein, 1952; Bachrach, 1958; McGowan *et alii*, 1954), though some have shown depressive effect (Douthwaite and Hunt, 1958; Kasich, Boleman and Rofsky, 1956). The effect of anticholinergic drugs on hypoglycæmia-stimulated secretion has been more thoroughly studied. Most workers have shown no inhibitory effect on acid secretion (Bayer and Bradford, 1952; Kasich *et alii*, 1956; Levin *et alii*, 1952; Roback and Beal, 1953; Weiseger *et alii*, 1954; Winkelstein, 1952; Bachrach, 1958; McKenna *et alii*, 1954). Others, however,

TABLE V.
Duration of Action of Anticholinergic Drugs.

Subject.	Drug.	Dose. (Mg.)	Maximum Depression. (Percentage of Normal.)	Time of Maximum Depression. (Hours.)	Duration of Action (Hours).	
					50% Inhibition.	20% Inhibition.
XIII	Propantheline	15	24	1·0	2·4	4·7
		30	25	1·0	4·0	6·5
		45	3	1·0	6·0	9·5
	Oxyphencyclimine	12·5	18	1·0	5·5	21·0
		20	3	1·0	8·0	19·0
		25	3	3·0	11·0	23·0
XIV	Propantheline	30	70	1·0	0	0
		60	15	1·0	2·5	5·0
	Oxyphencyclimine	10	67	4·0	0	6·5
		20	46	4·0	5·2	7·5
XV	Propantheline	30	73	2·0	0	4·5
		75	25	1·0	4·5	8·5
		90	22	1·0	4·5	7·5
	Oxyphencyclimine	10	53	2·0	0	15·0
		20	42	1·4	3·0	8·0
		30	25	1·0	6·5	10·5
XVI	Propantheline	30	94	3·0	0	0
		60	19	4·0	4·5	5·0
	Oxyphencyclimine	10	73	2·5	0	4·0
		20	52	1·0	0	3·5
		25	30	2·5	4·5	6·5
		40	1	2·0	8·5	25·0
XVII	Propantheline	30	83	2·8	0	0
	Oxyphencyclimine	10	73	2·0	0	6·0
		20	30	4·0	5·0	14·5
XVIII	Propantheline	30	44	3·0	4·5	5·5
XIX	Oxyphencyclimine	10	39	1·5	3·0	5·5
All subjects	Propantheline	43·7	41±9	1·8±0·3	2·7±0·6	5·0±0·8
	Oxyphencyclimine	19·5	35±6	2·1±0·3	4·2±0·9	11·5±1·6
Difference between means		—	6	0·3	1·5	6·5
Significance (*P*)		—	0·5	0·5	0·2	0·01

have demonstrated some suppression of gastric secretion (Lieber, 1956; Plummer *et alii*, 1951).

In this study on insulin-stimulated secretion, oxyphencyclimine administered ten hours previously was shown to have an inhibitory effect on acid and pepsin equivalent to 30 mg. of propantheline given three hours previously; at this interval the secretion was inhibited

TABLE VI.
Comparison of Saliva Flow Nine and a Half Hours after Oxyphencyclimine with that Two and a Half Hours after Propantheline.

Subject.	Saliva Flow Expressed as Percentage of Normal.	
	After Oxyphencyclimine (20 mg.).	After Propantheline (30 mg.).
XIII	55	30
XIV	87	78
XV	80	70
XVI	100	94
XVII	70	86
XVIII	75	52
XIX	87	90
Mean	79±6	71±9
Difference between means[1]	8	

[1] $P=0·4$.

to about 40% of its normal value. The concentration of acid was significantly reduced, but the concentration of pepsin rose. The value derived from the drop in acid output would be partly neutralized by the rise in pepsin concentration. In the pH range prevailing in most patients with duodenal ulcers, slight changes in acid concentration have little effect on peptic activity. However, with increasing pepsin concentration, proteolytic activity increases at approximately a linear rate (Piper, 1959). This increase in pepsin concentration, despite a fall in total output, was produced by both drugs, and probably all other effective anticholinergic therapy results in the same response.

The duration of the effect of the drugs and the time of maximal action have been assessed by their influence on salivary flow. There is no definite information available correlating inhibition of gastric secretion with changes in salivary flow after the administration of anticholinergic drugs. However, it is likely that if salivary flow does not parallel gastric secretion in extent, the changes in each will be parallel in time.

In the present investigation, it was found that the degree of inhibition produced at the intervals after the drug studies were made was approximately twice as great on gastric secretion as on saliva flow. The effect on meal-stimulated secretion was much less than that produced on hypoglycæmia-stimulated secretion. This is probably due to the fact that the response to a meal is partly nervous and partly hormonal, and detailed knowledge of the effect of anticholinergic drugs on the interplay between these two components of the response is unknown.

Despite its longer action, it would appear advisable for the drug to be given three or four times each day. By this means more complete suppression of secretion should be obtained than by the commonly used anticholinergic drugs. Wider spacing of the doses would necessitate larger doses, with consequent more severe side reactions than with smaller and more frequent doses. The dose schedule would need to be worked out for each patient, for the present study confirms the observations of Sun and Shay (1956) regarding the great variation in the effective dose of anticholinergic drugs from patient to patient. During the day, it would appear that 5 to 10 mg. is a satisfactory initial dose, this dose being increased until minor side reactions are present intermittently throughout the day. To control meal-stimulated secretion, the drug should be given about half an hour before a meal, as it takes at least this time for a significant effect to be exerted; Hunt (1950) has shown that secretion is most active immediately after a meal, with the peak acidity 40 minutes later. In the control of night secretion a long-acting preparation will be of greatest benefit, and the dose before retiring should be such that some side effect is present on wakening in the morning. The experience of many investigators

(McKenna *et alii*, 1954; Kirsner and Palmer, 1953) that none of the anticholinergics at present available produce anacidity without side effects must be appreciated by the patient, otherwise the only benefit derived from the drugs will be their placebo value. Finally, such side effects as increased intraocular pressure and difficulty of micturition must be borne in mind, especially when a long-acting preparation is used in the treatment of elderly patients.

SUMMARY.

1. The effect of the new anticholinergic drug oxyphencyclimine hydrochloride ("Daricon") on meal-stimulated and hypoglycæmia-stimulated gastric secretion and on saliva flow has been studied.

2. The duration of 50% inhibition was approximately 50% longer, and the duration of 20% inhibition approximately 100% longer, with oxyphencyclimine than with propantheline, when assessed by their effect on saliva flow with doses that produced approximately similar maximum effects.

3. The maximum effect of both drugs was obtained one to two hours after their administration.

4. It was found that oxyphencyclimine in the dosage of 25 mg. produced after nine to ten hours inhibition of acid secretion equal to 30 mg. of propantheline administered two and a half hours previously, when studied by hypoglycæmia-stimulated secretion. In both cases approximately 60% inhibition of acid secretion was obtained. Pepsin and the non-parietal components were inhibited to a lesser extent than acid secretion. The concentration of pepsin in the gastric juice rose, despite a fall in total pepsin output.

5. The inhibition of meal-stimulated secretion was significant only as regards the parietal-cell component and acid concentration.

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CIGARETTE SMOKING AND OCCLUSIVE ARTERIAL DISEASE OF THE LEGS.

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CIGARETTE SMOKERS who develop intermittent claudication of the lower limbs as a consequence of atherosclerosis invariably ask their physician whether they should continue to smoke, but, surprisingly enough, there is little concrete evidence on which the physician can base an answer to this question. While the harmful effects of cigarette smoking on other forms of peripheral vascular disease—for example, thrombo-angiitis obliterans (Gifford and Hines, 1951; Silbert, 1945)—are well documented, the situation in relation to atherosclerosis is obscure. Silbert and Zazeela (1958) state that the prognosis for arteriosclerotic patients with claudication who smoke is worse than in non-smokers, since the illness progresses more rapidly and leads to amputation more frequently in smokers. Roth and Shick (1958) infer that since cigarettes contain nicotine, a known vasoconstrictor, cigarette smoking is harmful in all kinds of occlusive

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TABLE I.

Effect of Smoking and Sham Smoking on Blood Flows.

Subject Data.						Blood Flows. (Millilitres per 100 ml. of Tissue per Minute.)											
		Smoking Habits.		Duration of Claudication in Years.	Estimated Walking Distance in Yards.	Foot.						Calf.					
						Sham Smoking.			True Smoking.			Sham Smoking.			True Smoking.		
Subject	Age. (Years.)	Cigarettes per Day.	Duration of Smoking in Years.			Before.	Slow.	Fast.	Before.	Slow.	Fast.	Before.	Slow.	Fast.	Before.	Slow.	Fast.
I	61	20+	20+	2+	100	0·9	0·6	0·7	0·7	0·7	0·6	2·6	2·1	1·9	2·1	2·2	2·2
II	57	None	—	3	400	2·5	1·9	1·7	—	2·2	1·5	3·6	3·8	3·0	3·6	2·7	3·3
III	58	40+	30+	2·5	150	1·0	0·7	0·8	0·8	0·9	1·1	1·7	1·8	1·9	2·2	2·4	2·4
IV	61	10+	30+	0·5	30	3·5	3·3	3·2	3·8	3·7	3·7	1·6	1·9	1·7	1·4	1·8	1·6
V	57	15+	20+	1·5	100	1·0	1·0	1·2	1·0	1·4	1·3	1·6	—	1·6	—	—	2·2
VI	73	10+	20+	3	100	2·2	2·4	2·2	2·7	2·6	2·6	1·4	1·3	1·3	1·1	1·0	1·0

vascular disease characterized by a diminished arterial blood supply. However, it is unknown whether the markedly reduced blood flow to the foot and calf, occurring in atherosclerosis of the lower limbs sufficiently severe to produce claudication, is further reduced by cigarette smoking.

In a study of this problem, we have measured foot and calf blood flows in the affected legs of male patients with occlusive atherosclerosis of a femoral artery before and immediately after cigarette smoking.

Materials and Methods.

Nine male patients, aged between 57 and 78 years, with intermittent claudication secondary to occlusive atherosclerosis of a femoral artery, were studied. Seven of these men were heavy cigarette smokers (Tables I and II).

Blood flow in the affected limb was measured by means of venous occlusion plethysmography, using an air plethysmograph (Barnett, 1950), in a room maintained at constant temperature with a range of ±1° F. All measurements were carried out in mid-afternoon, commencing two hours after the previous meal and previous cigarette. In each of six subjects foot blood flow was measured at the first visit, calf blood flow one week later.

Since Shepherd (1951) has shown that alterations in arm blood flow in healthy male student volunteers during cigarette smoking are in part due to alterations in rate and depth of respiration during smoking, measurements were carried out under a standard smoking regime, inhalation taking three seconds, exhalation two seconds.

Each subject, after basal measurements of resting blood flow, pulse rate and blood pressure, inhaled through an unlighted standard cigarette (not a filter tip) once per minute for five minutes ("slow sham smoking"). After this period of sham smoking, the measurements were repeated. The subject then inhaled through the same unlighted cigarette once every ten seconds for five minutes ("fast sham smoking"). Measurements were again made. After a quarter of an hour the whole procedure was repeated, but on this occasion the cigarette was lighted. Measurements of blood flow, pulse rate and blood pressure were thus obtained before and after sham and real smoking at slow and rapid rates.

In three subjects the foot blood flow during the period of reactive hyperæmia after temporary arterial occlusion was also measured. Blood flows were obtained resting and during the last minute of the period of fast sham or true smoking. Reactive hyperæmia was produced by applying an arterial occlusion cuff to the thigh immediately at the end of the period of sham or true smoking. Arterial occlusion was maintained for ten minutes, after which foot flows were measured at fifteen-second intervals for eight minutes (Table II).

It was soon observed that the foot and calf blood flows were very low, and that accurate measurements demanded careful attention to the pressure in the venous occlusion cuff. The pressure normally used (in the region of 60 to 80 mm. of mercury) would sometimes almost completely occlude arterial inflow, and a lower collecting pressure was necessary. In such cases the collecting pressure used was that which gave the greatest apparent blood flow.

Results.

The blood flows before and after sham and real smoking were not consistently different (Tables I and II). On several occasions there was a slight increase in calf or foot blood flow after both sham and real smoking. On others there was a slight decrease (Figures I and II). The increased flow after temporary arterial occlusion (reactive hyperæmia) was not markedly different after sham or real smoking (Figure III).

TABLE II.

Effect of Smoking and Sham Smoking on Foot Blood Flow During Reactive Hyperæmia.

Subject Data.						Blood Flows. (Millilitres per 100 ml. of Foot per Minute.)					
		Smoking Habits.				Sham Smoking.			True Smoking.		
Subject.	Age. (Years.)	Cigarettes per Day.	Duration of Smoking in Years.	Duration of Claudication in Years.	Estimated Walking Distance in Yards.	Before.	During.	Maximum from Reactive Hyperæmia after Sham Smoking.	Before.	During.	Maximum from Reactive Hyperæmia after Smoking.
VII	78	15+	20+	5·5	100	0·8	0·9	3·2	1·1	1·4	3·5
VIII	65	?	?	0·3	200	0·6	—	4·0	0·5	—	4·0
IX	64	20+	20+	2·0	300	4·8	4·5	10·8	3·7	4·1	9·1

Discussion.

The results indicate that in adult males with severe atherosclerosis of a femoral artery, cigarette smoking is not followed by any consistent alteration in blood flow to the calf or foot of the affected leg. Admittedly, the

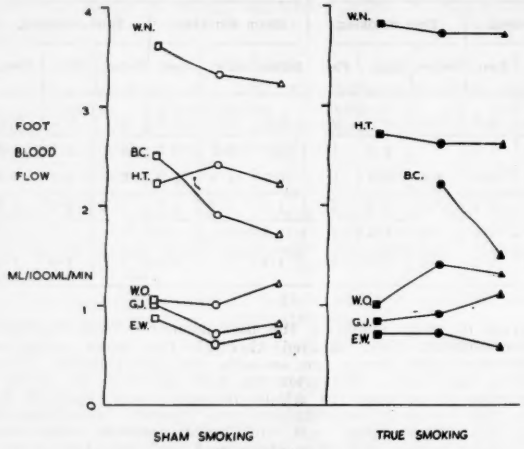

FIGURE I.

Foot blood flows before and during sham and true smoking at slow and fast rates. Before smoking: squares. Slow smoking: circles. Fast smoking: triangles. Sham smoking: open symbols. True smoking: closed symbols.

number of subjects investigated is fewer than ideal in a study of this kind; but the lack of consistency in blood flow changes suggested that the study of a larger number of subjects would be unlikely to yield additional informa-

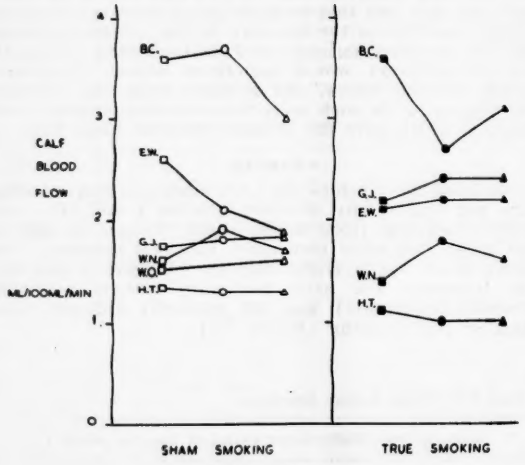

FIGURE II.

Calf blood flows before and during sham and true smoking at slow and fast rates. Symbols as in Figure I.

tion. Such changes as were observed might be due to alterations in cardiac output occurring with alterations in rate or depth of respiration, or might represent merely minute-to-minute changes in blood flow which occur under basal conditions.

The lack of a consistent alteration in blood flow in these experiments could possibly be explained by postulating a differential action of the absorbed products of tobacco smoke on the vessels of the skin and muscle. Thus decrease in blood flow in one tissue such as muscle might be compensated for by an increase in flow in another tissue, such as skin, in the same limb segment. Since the proportions of muscle and skin in the two segments studied are markedly different (muscle preponderating in the calf, and skin in the foot), such a mechanism is highly unlikely. It is therefore likely that cigarette smoking has no effect upon the already low peripheral flow in severe atherosclerosis.

These findings conflict somewhat with those of Coffman *et alii* (1958), who found that smoking reduced the calf blood flow and the flow during the period of reactive hyperæmia. In their work two cigarettes were smoked, and their subjects were a group of both young and elderly men. Whether any of the older subjects had atherosclerosis and claudication and, if so, whether diminished flows were observed in them after smoking, is not stated.

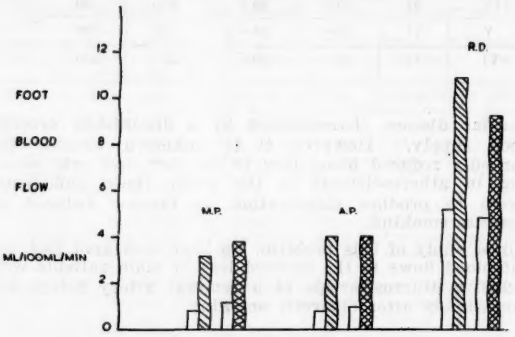

FIGURE III.

Resting foot blood flows and maximal blood flows from a reactive hyperæmia test following sham and true smoking. Open columns: resting blood flow. Hatched columns: maximal blood flow from reactive hyperæmia test following sham smoking. Cross-hatched columns: maximal blood flow from a reactive hyperæmia test following true smoking.

It is likely that the number of cigarettes smoked is important in physiological studies of this type. In our experiments smoking one cigarette was followed by insignificant changes in pulse rate and blood pressure, and it is therefore to be expected that any change in blood flow would not be marked.

Summary.

A study has been made of the effect of cigarette smoking on the blood flow in legs affected by atherosclerosis. In six adult males smoking did not result in consistent changes in foot or calf flow in the affected leg. Slight alterations in flow could be ascribed to alterations in cardiac output occurring with variations in the rate and depth of respiration, or could represent minute-to-minute changes in flow which occur under basal conditions.

Acknowledgement.

We are indebted to Miss Joan Ford for her technical assistance.

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CALCIUM VERSENATE IN THE DIAGNOSIS OF CHRONIC LEAD NEPHROPATHY.

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So much of the chronic renal disease in Queensland has been attributable to childhood ingestion of lead-containing paint that legislation was passed by the Queensland Parliament (1955) prohibiting the use of such paints on houses and other structures accessible to children. Many workers, especially Nye (1933), have used both statistical and clinical methods to demonstrate the increased incidence of chronic nephritis in Queensland compared with other Australian States, and the close association between this and preceding childhood lead poisoning. Murray (1939), completing a Commonwealth Health Department investigation, accepted lead poisoning as the major ætiological factor in Queensland's high incidence of nephritis. Recently, Henderson and Inglis (1957) increased the certainty of the relationship by showing that the mean lead content of bone in Queensland patients who had died with granular contracted kidneys of undetermined ætiology was significantly higher than that in similar patients whose renal disease could be ascribed to a known cause, such as chronic glomerulonephritis or pyelonephritis.

All these investigations, especially the earlier ones, revealed the difficulty of deciding incontrovertibly during life whether, in a particular case of chronic renal disease, the lesion was due to childhood lead poisoning or to other factors. Consideration of the family history and the natural history of the illness offered only highly suggestive evidence; estimation of the lead content of bone remained the only means of establishing previous lead absorption.

Calcium disodium ethylene-diamine-tetraacetic acid (calcium versenate) was introduced for the treatment of acute lead poisoning in 1952 (Bessman, Reid and Rubin), and its value rapidly became established. This compound binds potentially toxic lead in a water-soluble non-toxic complex or chelate, which is then readily excreted, with rapid remission of the clinical features of the acute attack of lead poisoning. However, many of the patients with chronic nephropathy due to childhood lead ingestion have had no subsequent exposure to lead for periods of up to 40 years. For this reason, and because the major portion of the lead was believed to be inaccessibly deposited in bone, it was initially thought that calcium versenate would not produce significant lead excretion in such patients. The low urinary excretion of lead was regarded as support for this view. However, the possibility that, with the biochemical abnormalities of chronic renal failure, lead might be released from bone and become more accessible to chelating agents suggested that the administration of versenate might give useful information. Accordingly, an intravenous infusion of calcium versenate was given to a number of patients with varying degrees of exposure to lead and to a number of normal subjects, and the resulting excretion of lead was measured.

Methods of Investigation.

All urine was collected over 24-hour periods into specially prepared bottles free of lead, and containing chloroform as a preservative. Six hours after the commencement of the third collection period, 1 gramme of calcium versenate in 250 ml. of a 5% w/v aqueous solution of dextrose was given by intravenous infusion over the course of one hour. The 24-hour collections were continued for three days from patients without renal disease, and for either six or eight days from those with renal disease.

From each specimen, a sample was checked for the absence of bismuth. An aliquot of urine, estimated to contain between 2 and 25 μg of lead, was then taken, and 5 ml. of concentrated nitric acid were added. This mixture was then taken to dryness on a hot plate at a temperature low enough to prevent combustion. The resultant solids were treated with concentrated nitric acid and heated until all organic matter was destroyed, when a white ash was left. This ash was then dissolved in 2 ml. of nitric acid and 50 ml. of water. Subsequently there were added 10 ml. of 20% w/v aqueous solution of citric acid to buffer the solution and prevent precipitation of calcium phosphate, 5 ml. of 10% w/v aqueous solution of potassium cyanide to complex calcium and foreign heavy metals and prevent their colour reaction with dithizone, and 1 ml. of 20% w/v aqueous solution of hydroxylamine hydrochloride to prevent oxidation of dithizone, and the pH was adjusted to 9·5 (thymol blue) by the addition of ammonium hydroxide. A blank determination was performed with each batch. The lead in this solution was then determined by a modification of the "mixed colour" dithizone method of Kozelka and Kluchesky (1941). The accuracy of this method was such that, between concentrations of lead from 0·01 to 0·30 mg. per litre, no duplicate of any specimen would have varied from the figure shown by more than 0·01 mg., and between 0·30 and 0·60 mg. per litre, by more than 0·02 mg. Except for beginning with a weighed specimen of bone instead of an aliquot of urine, an identical method was used for the estimation of the lead content of bone.

Reports of Cases.

An estimate of the degree of renal impairment in the patients to be described may be made by reference to Table I, in which the degree of proteinuria and the plasma levels of creatinine, urea and inorganic phosphate, as well as the plasma carbon dioxide content are enumerated.

CASE I.—The patient was a male, aged 45 years. At the age of four years, he had suddenly developed irritability, mental impairment and bilateral wrist and foot drop. Subsequently, he had remained mentally dull, with occasional delusional episodes. He had permanent residual foot drop, and a persisting renal lesion. He had worked only casually as a gardener, and had had no known exposure to lead since the episode of acute plumbism 40 years previously. At the age of 22 years he had a convulsive seizure, and though the blood pressure was normal at that time, he was found to have slight proteinuria, a blood urea content of 49 mg. per 100 ml., and occasional granular casts in the urine. He presented at the age of 45 years with severe renal failure. Absolute isosthenuria was present, and microscopic examination of the urinary deposit showed occasional cellular casts. The arterial blood pressure was 220/130 mm. of mercury. The lead content of a trephine disk of skull bone was significantly elevated (see Table I).

CASE II.—The patient was a female, aged 31 years. At the age of four years, she had been admitted to hospital with lead poisoning. Symptoms of that illness were vomiting and constipation, and she was found to have bilateral foot drop and weakness of all muscles of the right leg. The hæmoglobin value was 9 grammes per 100 ml. of blood, and there was proteinuria and a raised blood urea level (76 mg. per 100 ml.). From the age of 16 years, she had periodic episodes of headache and vomiting. Labour was induced in her first pregnancy because of hypertension and toxæmia, and a subsequent pregnancy was terminated. Intermittent attacks of gout began at the age of 22 years. At the age of 30 years she developed congestive heart failure with angina pectoris, and an exacerbation of this caused her admission to hospital at the age of 31 years. Renal function was much impaired at this time, and isosthenuria was present. Microscopic examination of the urinary deposit showed three leucocytes per high-power field, with occasional red cells. The arterial blood pressure was 210/120 mm. of mercury.

CASE III.—The patient was a male, aged 39 years. This patient had had no recognized episode of acute lead poisoning. However, at the age of two years he had had an illness, during which walking was difficult, and after which he failed to thrive and had slight mental impairment. He had been rejected from the Navy at the age of 18 years because of proteinuria, and prior to his admission to hospital, his private doctor had known him to be severely hypertensive and to have proteinuria. He had worked as a cooper, and had no industrial exposure to lead. He was admitted to hospital comatose and moribund after a cerebral hæmorrhage. He had bilateral pes cavus and absence of ankle jerks, consistent with previous lead neuropathy, and the association of this with uræmia suggested lead as a common ætiological factor. An infusion of calcium versenate was therefore administered, and urine was collected over 12 hour periods for the 36 hours during which he survived.

CASE IV.—The patient was a female, aged 42 years. She had developed symptoms of acute lead poisoning at the age of three years, and the weakness of her legs prevented walking for the next two years. She was left with bilateral pes cavus, and absence of ankle jerks. There was no subsequent exposure to lead. By the age of 33 years, she

TABLE I.

Biochemical Details of Patients and Control Subjects Who Received a Calcium Versenate Infusion.

Case or Control Number.	Sex.	Age. (Years.)	Hæmoglobin Value. (Grammes per 100 Ml.)	Protein in Urine. (Grammes per Litre—Esbach.)	Plasma Creatinine Content.[1]	Plasma Urea Content.[1]	Plasma Inorganic Phosphate Content.[1]	Plasma Carbon Dioxide Content. (mEq/l.)	Lead Content of Skull Bone.[2]		Time Since Last Known Lead Exposure. (Years.)	Clinical Comments.
									Inner Table.	Outer Table.		
Case:												
I	M.	45	10·4	0·5	9·5	245	9·4	16	12·7	9·7	41	Chronic lead nephropathy.
II	F.	31	9·2	0·5	8·8	180	6·5	18	—	—	27	Chronic lead nephropathy.
III	M.	39	8·7	1·0	20·3	404	8·3	13	—	—	37	Terminal lead nephropathy.
IV	F.	42	12·2	0·5	1·9	76	2·4	21	—	—	39	Lead nephropathy with gout.
V	F.	41	10·1	1·0	11·0	166	5·8	28	5·5	4·9	37	Lead nephropathy, recent acute deterioration.
VI	M.	32	14·6	1·5	1·8	64	3·8	28	8·6	4·6	25	Renal hypertension. Elevated bone lead content.
VII	F.	46	13·5	Trace	1·2	21	3·5	27	16·0	19·5	40	Childhood lead poisoning. No renal lesion.
VIII	M.	45	15·4	Nil.	1·3	44	4·0	28	—	—	Seven months	Recent acute plumbism.
IX	M.	54	8·0	3·0	8·1	152	8·7	20	—	—	(Nil)	Chronic glomerulonephritis.
X	F.	33	9·1	Trace	3·3	104	2·8	18	—	—	(Nil)	Chronic pyelonephritis.
Controls:												
I	M.	31	Normal range	Nil	1·3	16	3·5	—	—	—	(Nil)	Normal control subject.
II	M.	25	Normal range	Nil	1·2	21	4·7	—	—	—	(Nil)	Normal control subject.
III	M.	30	Normal range	Nil	1·2	34	4·5	—	—	—	(Nil)	Normal control subject.
IV	M.	33	Normal range	Nil	1·2	37	4·1	—	—	—	(Minor occupational)	Normal control subject.
V	F.	34	Normal range	Nil	0·9	26	3·9	27	2·7	2·7	(Nil)	Idiopathic epilepsy.
VI	M.	27	Normal range	Nil	1·6	38	4·0	33	1·5	1·4	(Minor occupational)	Tuberose sclerosis with benign renal tumour.

[1] Milligrammes per 100 ml.

[2] Milligrammes per 100 grammes of moist bone.

was mildly hypertensive (blood pressure 140/100 mm. of mercury), the blood urea content being 65 mg. per 100 ml. The inulin clearance was 30 ml. per minute, and that of "Diodrast" 167 ml, per minute. At the age of 38 years, she began to have *grand mal* epilepsy; subsequently temporal lobe seizures developed. On her admission to hospital she was somewhat slow mentally, and had marked tophaceous gout affecting chiefly her hands and feet. The specific gravity of the urine varied from 1·006 to 1·013 with dilution and concentration tests, and microscopic examination of the urinary sediment showed only occasional leucocytes, erythrocytes and coarse granular casts. The arterial blood pressure was 150/120 mm. of mercury. There was no significant anæmia, and her renal failure was only of moderate degree. Details are given in Table I.

CASE V.—The patient was a female, aged 41 years, who had developed symptoms of acute lead poisoning at the age of four years, with irritability, languor, generalized weakness and severe constipation. Mild symptoms recurred annually until the age of 10 years, probably in association with infections. At that age proteinuria was observed, and she was treated for lead poisoning with a mixture which she took for eighteen months. She remained well subsequently, married at 21 years and had four children. Although proteinuria was noted throughout all her pregnancies, there was no toxæmia. She continued to feel well until the age of 40 years, when she had a severe episode of hypertensive encephalopathy. With hypotensive treatment, she experienced subjective improvement. She was admitted to hospital one year later with left hemiparesis and aphasia. Severe renal failure was present with acidosis (plasma carbon dioxide content 8 mEq/l.). This had been relieved and her general condition improved before an infusion of calcium versenate was given, and repeated two weeks later. This improvement continued subsequently, the plasma creatinine level falling from 11 mg. to 6·6 mg. per 100 ml. within a month. Isosthenuria was present, and microscopic examination of the urinary deposit showed four to six leucocytes per high-power field, together with occasional granular casts. The blood pressure was 210/150 mm. of mercury, and the lead content of the skull bone was moderately elevated (see Table I).

CASE VI.—The patient, a male, aged 32 years, was admitted to hospital with severe hypertension and proteinuria. There had been no recognized episode of lead poisoning, and no industrial exposure to lead. At the age of 22 years, proteinuria had been found, which had not been detected four years previously. At that time, the blood urea content was 40 mg. per 100 ml., and impairment of renal function as judged by the urea concentration test was already present, preceding in time the development of hypertension. He had been troubled by headaches from the age of 29 years, and on his admission to hospital at the age of 32 years, had an arterial blood pressure of 220/150 mm. of mercury. Microscopic examination of the urinary sediment showed few cellular elements, and numerous casts, chiefly hyaline but occasionally renal cellular in origin, were present. Trephine skull bone biopsy showed a significantly elevated bone lead content. (See Table I.) The first calcium versenate infusion was administered to this patient five months after his admission to hospital, when he was feeling perfectly well and had a blood pressure of 140/100 mm. of mercury, and the second infusion was given two weeks later.

CASE VII.—The patient was a female, aged 46 years. At the age of six years, the patient had been admitted to hospital with acute lead poisoning. At that time, a lead line was noticed on the gums, punctate basophilia was present in the peripheral blood and weakness of the leg muscles was found. She was subsequently retarded mentally. At the age of 37 years she developed an agitated delusional state and was admitted to a mental hospital, where she has since remained. Her blood pressure at that time was 160/110 mm. of mercury, and no proteinuria was present. When she was investigated at the age of 46 years, there was evidence of only slight renal impairment. The specific gravity of the urine varied from 1·002 to 1·015 with fluid administration and restriction, and microscopic examination of the urine revealed no abnormality. The arterial blood pressure was not significantly changed. However, the lead content of her skull bone was greatly elevated—16·0 mg. per 100 grammes of moist bone in the inner table and 19·5 mg. per 100 grammes of moist bone in the outer table.

CASE VIII.—The patient was a male, who had had no known exposure to lead until May, 1958, when, at the age of 45 years, he began work in a battery factory. After 10 weeks he developed lead colic, and was found to have a stipple-cell count of 6700 per 1,000,000 red cells, a urinary lead content of 0·24 mg. per litre, and excess coproporphyrin in the urine, these findings having been normal when his exposure to lead began. After two 10-gramme courses of calcium versenate, excess coproporphyrins disappeared from his urine. At the time of the versenate infusion the patient had had no significant exposure to lead for seven months, and no versenate treatment for five months. There was no definite renal impairment, and the patient felt perfectly well.

CASE IX.—The patient was a male, aged 54 years, who had developed a nephrotic syndrome at the age of 51 years, the arterial blood pressure at that time being 180/115 mm. of mercury. Two years later the arterial blood pressure was 260/140 mm. of mercury, and renal impairment had increased, the blood urea content having risen from 50 to 150 mg. per 100 ml. over this period. Acidosis and hyperphosphatæmia had also developed, together with isosthenuria. Microscopic examination of his urinary sediment showed only occasional leucocytes and renal cellular casts. He had worked as a station hand in western Queensland for most of his life, and was unable to recall any significant exposure to lead.

CASE X.—The patient was a female, aged 33 years, a housewife, who had previously been in good health. At the age of 30 years, she had developed symptoms of severe cystitis with pyuria, which failed to respond to a variety of antibiotics. At this stage, excretion pyelograms showed very poor renal concentrating power, and the blood urea content was 68 mg. per 100 ml. Eighteen months later her symptoms still persisted, and the blood urea content had risen to 125 mg. per 100 ml. After cystectomy and ureteric transplant into an ileal loop conduit, two severe attacks of pyelonephritis occurred, each associated with hypochloræmia, hyponatræmia and acidosis (plasma carbon dioxide content of 9 mEq/l.), which both responded to antibiotic treatment. She remained normotensive throughout. After recovery from these attacks, the calcium versenate was administered, the urine being collected directly from the ileal conduit. No history of significant exposure to lead could be elicited.

Control Subjects.

CONTROL SUBJECTS I TO VI.—The first four of the control subjects were in good health; the last two had a trephine disk of skull bone removed during neurological investigation. (See Table I for lead content, which was normal.) Control subject VI was the only one with any suggestion of renal disease, and in his case, excretion pyelography disclosed a left renal tumour. As he also had tuberose sclerosis, this tumour was regarded as being benign. Control subjects II, IV and VI had been prone to chew toys and other articles in infancy. Control subjects IV and VI were the only ones with any possible adult exposure to lead, and in both such exposure would have been slight.

Results.

The accompanying diagrams (Figures I and II) and Table II illustrate the change in urinary lead excretion after the calcium versenate infusion. In all cases, including those of lead nephropathy, excretion of lead was within the normal range before calcium versenate, but rose after its administration. In the group of control subjects (I to VI), the rise in urinary lead excretion occurred on the day of the versenate infusion, with a fall towards pre-infusion values on the subsequent day. The greatest lead excretion occurred in control subjects IV and VI. These two subjects would have been expected on clinical grounds to have the greatest occupational exposure to lead.

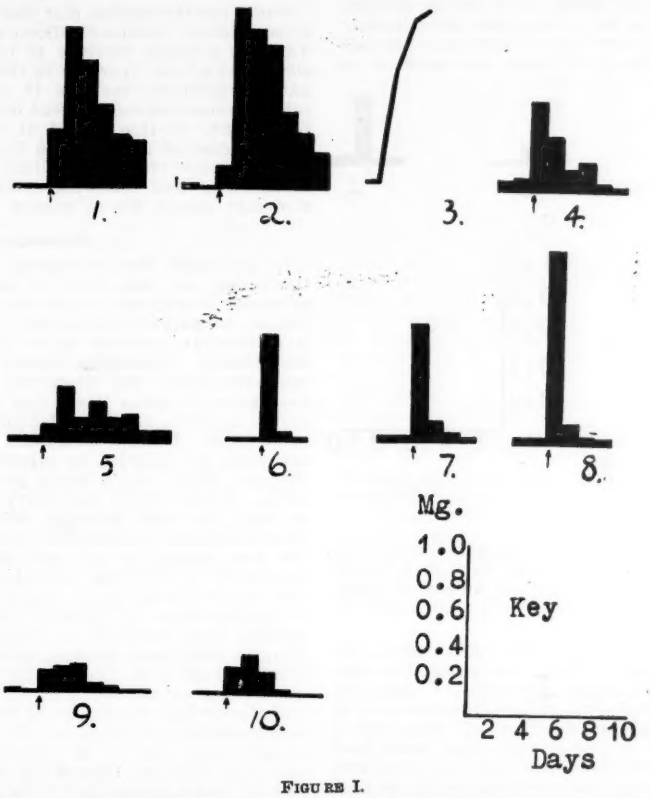

FIGURE I.

Cases. Diagram showing lead excretion (milligrammes per 24 hours) of 10 patients given calcium versenate.

The first four patients to be considered (Cases I, II, IV and V) had different degrees of renal failure due to childhood lead poisoning, and showed varying degrees of increase and prolongation of lead excretion after calcium versenate therapy. In Cases I and II the patients were in a state of advanced renal failure with hyperphosphatæmia and acidosis. Their urinary lead excretion was not markedly different from that of the group of control subjects on the day of versenate administration; but on the subsequent day their lead excretion was increasing, whereas that of the control subjects was reverting towards normal. This increase persisted for at least a week, and accounted for 3 mg. of lead in that time, equivalent in Case I to five months' excretion at the pre-infusion rate.

In Case IV the patient, who had long-standing moderately severe lead nephropathy, had a urinary excretion of lead that rose from a high normal level before the infusion to one only slightly exceeding the highest normal figure on the day of the infusion. However, a significantly raised level persisted for another four days, the excretion after versenate therapy exceeding the normal by almost 1 mg. The patient in Case V was a woman who had moderately severe nephropathy due to lead, with recent deterioration in renal function. In her results, excretion for the second day after the first versenate infusion was not an accurate figure, as the value had to be extrapolated. Her urinary lead excretion was low on the day of versenate administration, but increased subsequently and continued at an

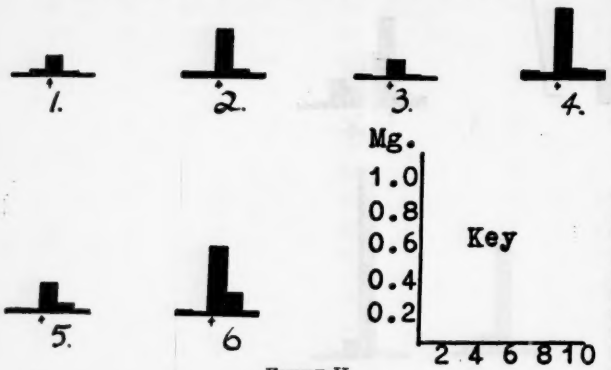

FIGURE II.

Controls. Diagram showing lead excretion (milligrammes per 24 hours) of six control subjects given calcium versenate.

elevated level for a particularly long period. During this time, she excreted almost 1 mg. of lead more than would normally have been expected. With the second infusion two weeks after the first, almost two-thirds of this amount was excreted in the urine.

The next three patients had minimal renal lesions, but varying contact with lead. Their lead excretion was increased, but not significantly prolonged. Case VI was that of a young patient with hypertension and a primary renal lesion probably due to lead, who had a skull lead content known to be elevated. His raised lead excretion occurred entirely on the day of versenate administration, but was only half as great again as that of the highest control subject. After a second infusion, lead excretion was more than two-thirds of that after the first. The patient in Case VII was known to have had definite lead poisoning as a child, and had an extremely elevated skull lead content. None the less, at the age of 46 years, although hypertensive, she had only minimal renal impairment. Her lead excretion was similar to that in Case VI, being significantly elevated on the day of the infusion, and falling rapidly thereafter. She excreted 0·8 mg. more lead after the infusion than she would have done normally. In Case VIII the patient was given a similar dose of calcium versenate so that his lead excretion could be compared with that of other patients. His acute poisoning had occurred nine months earlier; he had had only minor contact with lead for seven months, and had been treated with calcium versenate five months earlier. His excretion of lead occurred mainly on the day of the infusion, and totalled 1·2 mg. more than it would have been without the calcium versenate.

Two cases of renal failure due to causes other than lead are included (Cases IX and X). In both of these, the total excretion of lead is below that of the control subject with the highest lead excretion. There is also marked delay in the rate of lead excretion, this being continued at an elevated level for at least three days.

Case III was included in order to demonstrate the use of this infusion in the diagnosis of lead nephropathy. The patient seemed moribund, and no further specific therapy was possible. He was grossly acidotic, hyperphosphatæmic and uræmic. Though he was oliguric, his urine volume was fairly constant throughout the period of the test. His urinary lead concentration, 0·05 mg. per litre beforehand, rose to 0·70, 1·0 and 1·05 mg. per litre in three consecutive 12-hour collection periods after the standard versenate infusion. This was regarded as indicating an excessive amount of lead in his blood and tissue fluids, and as confirmation of the clinical opinion that his chronic renal failure was due to lead poisoning in childhood.

These results suggest that the urinary excretion of lead after calcium versenate follows several different patterns. There is a minor increase in healthy normal subjects, a somewhat greater increase in those with exposure to lead, and a significant increase in some patients with renal failure whose exposure to lead occurred more than 20 years beforehand. In this regard, it appears to be greatest in the presence of acidosis and hyperphosphatæmia, and, in the presence of renal failure, the increased urinary excretion of lead following calcium versenate administration may persist for at least a week.

Discussion.

In prolonged lead absorption, much lead is stored in the bones, and this may be mobilized during metabolic stress, or in acidosis (Aub *et alii*, 1925), or by the administration of parathyroid extract (Hunter and Aub, 1927). A somewhat similar state occurs in chronic renal insufficiency (Albright, Drake and Sulkowitch, 1937; Stanbury, 1957), and when this is due to childhood lead absorption, it seems likely that lead, previously deposited in the skeleton, may be released into the soft tissues and body fluids. In this situation, lead would become more accessible to chelation by calcium versenate (Markus and Spencer, 1955), which would promote its excretion in the urine. Rubin (1953) has shown that, in animals exposed to lead, the lead excretion following calcium versenate administration is associated with a marked reduction in the lead content of the soft tissues, and a considerable diminution in the lead content of bone, the removal from soft tissues being proportionately more than from bone. A consideration of Cases VI and VII suggests that, in humans also, some of the excreted lead may be derived directly from bone, because, while both these patients had elevated bone lead levels, neither had sufficient metabolic disturbance or alteration in acid-base balance to promote transfer of lead from bone to tissues. In these two cases, lead excretion on the day of the infusion was significantly greater than that of the control subjects, though by no means as great as that of the patients with renal failure due to lead nephropathy. This may suggest that there is a normal equilibrium between bone lead and tissue lead, and that this is disturbed in renal failure.

A single versenate infusion has been previously used as an index of exposure to lead in cases of acute lead poisoning. Hardy *et alii* (1954), in reporting three cases of lead poisoning treated with calcium versenate, describe three normal control subjects, without undue exposure to lead, who received diagnostic infusions of calcium versenate. Variations in method make these studies not comparable with the present group. Rieders (1955) has reported the effect of slow intravenous administration of calcium versenate in a dosage of 0·1 gramme per kilogram of body weight on urinary excretion of lead and other metals, and has demonstrated a greatly increased response in men exposed to lead, but without signs and symptoms of lead poisoning. In the 11 normal control subjects reported, the mean rise with the above-mentioned infusion was from 0·126 to 0·614 mg. per litre of a 24-hour specimen. In an average man weighing 70 kg., the amount of versenate used in Rieder's series would be seven times that administered in the present study. He interprets these results as showing that, if more than 1 mg. of lead per litre of a 24-hour specimen of urine is found after the foregoing dose of calcium versenate, abnormally large amounts of lead are present in the soft tissues of the individual involved. However, Zambrano, Rossi and Mantovano (1955), after administering intravenously 2 grammes of calcium versenate daily for a week to 20

control subjects without exposure to lead, found that none of these excreted more than 0·25 mg. of lead each day. By comparison, none of a group of 12 subjects exposed to lead excreted less than 0·5 mg. a day. These authors were prepared to accept this rather lower figure (0·5 mg. of lead per day) as indicating significant lead exposure.

The rate of excretion of the versenate, once it has exchanged its calcium ion for a lead ion, is also of importance. Originally, Belknap (1953) reported a urinary excretion of 50% to 60% of the administered versenate within 48 hours. Foreman, Vier and Magee (1953), using intravenous infusions of ^{14}C labelled calcium versenate in animals, have subsequently shown a 95% to 98% excretion within six hours. However, Hardy *et alii* (1954), by analysing urine obtained from lead-exposed and normal subjects after calcium versenate therapy by the ashing and coprecipitation methods, deduced that versenate was not entirely excreted within the first 24 hours, and that small amounts were present for one to two days. Versenate excretion, therefore, is relatively rapid, and such a mechanism would best explain our results of a maximum lead excretion on the day of versenate administration in normal subjects and in those patients without significant renal impairment.

Prolongation of the period of increased lead excretion occurred only in patients with poor renal function, and this might suggest that the delayed lead excretion and versenate removal in these cases was due to the renal impairment itself. This delay would, moreover, keep

TABLE II.

Cumulative Urinary Excretion of Lead in Milligrammes.

Case or Control Number.	Pre-Infusion Days.	Days after Versenate Infusion.			
		1	2	4	6
Case:					
I ..	0·02	0·35	1·31	2·57	3·17
II ..	0·03	0·14	1·22	3·03	3·83
IV ..	0·07	0·54	0·86	1·19	1·27
V (i) ..	0·04	0·10	0·43	0·81	1·11
(ii) ..	0·03	0·07	0·33	0·54	0·65
VI (i) ..	0·02	0·65	0·71	0·76	—
(ii) ..	0·03	0·43	0·58	0·64	—
VII ..	0·04	0·71	0·85	0·96	—
VIII ..	0·06	1·16	1·30	1·41	—
IX ..	0·02	0·13	0·29	0·52	0·59
X ..	0·02	0·17	0·41	0·59	0·63
Controls:					
I ..	0·03	0·13	0·16	0·20	—
II ..	0·04	0·29	0·34	0·42	—
III ..	0·02	0·12	0·15	0·19	—
IV ..	0·04	0·43	0·50	0·61	—
V ..	0·03	0·18	0·24	0·29	—
VI ..	0·03	0·41	0·47	0·55	—

calcium versenate circulating in the body for a much longer period. Furthermore, it has been shown by Rieders, Dunnington and Brieger (1955) that only a small proportion (varying from 0·4% to 3·3%) of the administered calcium versenate is excreted as the lead versenate complex, the rest being excreted unchanged. Thus, in those patients with renal impairment, and presumably delay in excretion of the calcium versenate, there would be a greater opportunity for interaction between calcium versenate and lead before their excretion. Although no measurements of excreted versenate have been made, it seems likely that, in those patients excreting increased amounts of lead a week after the infusion, a far higher proportion than usual of the excreted versenate may have been in the form of lead versenate. This consideration also applies to the two patients with renal failure not due to lead, whose lead excretion was comparable with that of the highest control subject. Delay in renal excretion of calcium versenate in these two patients may have given opportunity for a greater proportion of this to be converted to lead versenate before excretion, with the production of a somewhat greater urinary excretion of lead.

The lower excretion of lead with a second calcium versenate infusion (see Table II) would be expected if most of the lead excreted was tissue lead, which required some time to return to its previous level after being depleted by the first versenate infusion. The effect of intravenously administered sodium dihydrogen versenate on urinary lead excretion has not yet been compared with that produced by the calcium disodium versenate. The possibility of alteration in the rate of lead excretion via the fæces has not been considered in this present investigation, but Foreman and Trujillo (1954) have shown that parenterally administered calcium versenate is excreted almost entirely in the urine. This response to calcium versenate must be expected to be very variable. Just as the initial degree of lead ingestion will have varied, so will the bone lead content, the extent of lead turnover, the rate of lead excretion, and the amount of lead in the tissues. In the absence of recent exposure, the response may be regarded as an approximate reflection of total lead exposure during life, rather than an all-or-none response placing a patient in a lead-free or a lead-exposed category.

The importance of the response to a calcium versenate infusion lies in its application to the determination of a definite ætiological diagnosis in a patient with chronic renal disease. With lead nephropathy, even renal biopsy would not be diagnostic, and the usual clinical method of making the diagnosis is to infer that it is highly likely from the association of a chronic renal lesion, regarded as due to lead on clinical grounds, and a high lead content of bone obtained by biopsy. It seems likely that the management of chronic lead nephropathy may differ from that of other forms of chronic renal disease, and one of us (B.T.E.) is at present investigating this aspect. Another application lies in the investigation of cases of renal hypertension in which the cause of the underlying renal lesion is being sought. In such a case, the demonstration of a high skull bone lead content (as in Case VI) would prove of diagnostic value. With more knowledge concerning the response to a versenate infusion, this simpler method of investigation may take the place of the more complicated bone lead estimation in establishing in a particular case that lead has been responsible for producing the renal lesion.

Summary.

Increased and prolonged lead excretion following a standard intravenous infusion of 1 gramme of calcium disodium versenate has been shown to occur in some patients with advanced renal disease due to childhood lead poisoning who had had no appreciable exposure to lead for periods of up to forty years. This has been attributed to the mobilization, in prolonged renal failure, of the increased amounts of lead stored in the bones of such patients, and the release of lead into the soft tissues, where it is more accessible to the versenate. The use of such an infusion in the diagnosis of chronic lead nephropathy has been suggested.

Comparative studies are presented in two cases of chronic nephritis not due to lead, in one case of recent acute lead poisoning, in another in which there was an elevated lead content in the skull bone but no significant renal impairment, and in six controls.

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THE DEATH OF MRS. TRUEMAN OF TIARO: MEDICAL PRACTICE ON THE MARY RIVER EIGHTY YEARS AGO.[1]

By DOUGLAS GORDON,
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My story begins on Monday, November 9, 1874, when Mrs. Emmeline Trueman, who resided with her sister, Mrs. Biddles, of Home Park, near Tiaro, went into labour. The patient was aged about 29 years, had been married some eleven months, and was carrying her first child.

By that night the two acolytes to the principal in this tragedy had taken up their station at Home Park, which was, and still is, situated on the east bank of the Mary River, near the present railway siding of Netherby. From some ten miles to the north had come William Gill Bailey, planter, unqualified medical adviser to the farmers on the Upper Mary River and, since the beginning of 1874, Member of Parliament for Wide Bay. From the south, near Gootchie, had come the good wife Maria Ridgway—a person of some experience in the tribulations and labours of women. These two remained in attendance—and sometimes in conflict—until the unfortunate patient died on the following Monday morning, November 16, after having been in labour for about a week.

Since no medical certificate of death was forthcoming, George Faircloth, the district police magistrate, held an inquiry on December 9 at Tiaro, and forwarded a copy of the depositions to Brisbane, at the same time requesting instructions as to further action, if any. S. W. Griffiths, the Attorney-General of the day, minuted the file on December 17, 1874:

"The death appears to have resulted from delay in delivery. It does not appear that there was any criminal negligence on the part of anyone."

There the matter might well have rested, but for the fact that Bailey was one of the minor fry in the Liberal Government of the day. It was fair grist to the opposition's political mill, therefore, to infer that the Attorney-General was concealing some crime or irregularity committed by one of his colleagues. After some backing and filling, the papers relating to the affair were tabled on July 13, 1875. They caused hardly a ripple—*The Courier* of the time barely mentioned the matter—and nothing of adverse nature appears in the Parliamentary records about Mr. Bailey. However, the action did make them part of an official Parliamentary record, where they appear in Votes and Proceedings for 1875. On this slim thread of circumstance hangs the lecture for tonight, for in looking through Parliamentary records for something entirely different, my eye was caught by this tale of sorrow so typical of the early colonial medicine of those times, and so foreign to that of our own (*vide* Appendix).

You have before you my summary of the depositions as tabled in Parliament. From it you will note that Mrs. Trueman, in spite of solicitous care, remained in labour for days on end, had very ineffectual pains, never really looked like producing a baby of her own volition, and eventually succumbed to the sequelæ of infection—an almost inevitable result considering the time and circumstances. To furnish an obstetrical commentary is beyond my ability, but Professor Shedden Adam has kindly (and I think courageously) consented to reconstruct this clinical case across eighty-three years of time. His comments are as follows:

> Reading between the lines, it would seem that Mrs. Trueman suffered not from any actual organic obstruction to the birth, but rather from a type of faulty uterine action which we used to call primary uterine inertia. We now recognise two varieties of this condition—the hypertonic, with painful colicky but ineffectual contractions; and the hypotonic with infrequent, relatively painless, but equally ineffectual contractions, both being accompanied by failure of full dilation of the cervix. It would seem that Mrs. Trueman suffered from the latter variety, as evidenced by the various attempts to stimulate more effective contractions which, unfortunately, were ineffective. Like so many of these cases, her membranes had ruptured early in the labour and intra-amniotic infection was apparent by the middle of the week under consideration.
>
> I cannot help feeling that the unfortunate Mr. Bailey acted with a certain amount of wisdom up to a point, but would perhaps have been wiser to seek qualified assistance rather earlier. On the other hand, if Bailey's finding about the lack of dilatation of the cervix by as late as the Saturday morning ("size of half a crown") was correct (and there is little reason to believe that it was not so) then the Dr. Little who eventually came from Maryborough would not have been able to perform forceps delivery without prior incision of the cervix or forcible dilatation, which could easily have been fatal, especially in the presence of established sepsis. No doubt he would have arranged for the patient to be transported to hospital, but even then delivery by Cæsarean section would have been a very risky procedure. I note that the Dr. Little, in his depositions, stated that the patient could have been delivered on the Thursday, but in this he was being guided by the midwife's opinion. I note also that he refers to the narrowness of the passage, so that there may have been some element of obstruction as well. However, he states that he found the head low down in the pelvis so that it must have been chiefly an outlet contraction and thus obstruction was not the cause of the protracted first stage. The opinions on the case, expressed by the midwife, I would think are without value of any kind. It is well known that patients suffering from this condition have a desire to bear down long before the cervix is fully dilated, and this gives an erroneous impression that the patient is in the second stage of labour. The bearing down pain is, in fact, due to a spasm of the lower bowel.
>
> I would think that this unhappy incident illustrates the extent to which obstetrics has become a part of preventive medicine, inasmuch as—
>
> (*a*) protracted labour of this type is minimised by good ante-natal care and complete confidence by the

[1] Inaugural lecture delivered on March 21, 1958, at the Medical School, University of Queensland.

patient in all concerned, and a relaxed frame of mind engendered by prenatal relaxation exercises, etc.;

(*b*) dystocia due to pelvic contraction could be anticipated by proper ante-natal care together with the judicious use of X-ray pelvimetry;

(*c*) genital tract sepsis could be avoided by the judicious prophylactic use of antibiotics after 24 hours in labour, and with ruptured membranes;

(*d*) death from maternal shock and exhaustion (as in this case) could now be minimised, if not eliminated, by the timely and judicious use of the lower segment Cæsarean section in cases of disordered uterine action with fœtal distress and perhaps some degree of pelvic contraction;

(*e*) situations such as this, which have literally "got out of hand" are practically unknown in patients who have been in hospital from the onset of their labour. Even in the U.K. now there is a strong move to have all primiparæ admitted to hospital.

I have been very lucky in my commentator, since Professor Shedden Adam has not only furnished me with a clear, concise obstetrical commentary, but without prompting has given me my cue for the theme of this lecture—some aspects of the contrast between medicine then and now.

Here was a woman who, by modern standards, should not have died. She had been in labour for a week, and in spite of the fact that she was only some twenty odd miles from a town of 5000 people with a hospital and five qualified medical practitioners, no medical help was requested until it was too late. Her relatives were content to have the case managed by a "quack" in a remote farm house. Even when the outcome was fatal, though the incident gave rise to some adverse comment, there was no great local indignation, for the farmers of the area were used to the coming of the Angel of Death at unexpected times, whether the medical attention available was qualified or otherwise. The circumstances of the times were such that summoning of medical assistance was for the most part impracticable and often fruitless.

What trouble there was came mainly from Brisbane, and was political in nature. The Parliamentary session in July, 1875, had not been without event for Bailey. There had been floods along the Mary in February, 1875, and his handling of flood relief, as well as the death of Mrs. Trueman, had brought forth comment from the political opposition. As a matter of fact, most of the indignation was of a spurious political kind about forcing potatoes and flour on a proud independent race of Mary River farmers who did not need relief anyway. No one really seemed to worry very much about poor Mrs. Trueman's death.

The Maryborough correspondent of *The Courier* (July 26, 1875) eventually had this to say:

> Some excitement exists on the river respecting recent attacks on Mr. Bailey concerning the distribution of flood relief, and also at the prospect of renewed trouble about Mrs. Trueman's death. The farmers are getting angry. They declare the whole thing is got up by Mr. Bailey's old enemies, that in the distribution he did his best and that things were managed far better than on previous occasions and that in the matter of poor Mrs. Trueman he was unfortunate and in no way to blame. The affair is creating quite a revulsion of feeling in Mr. Bailey's favour. Some who have been dissatisfied before are now loudly denouncing his assailants, and I am sold that an address expressing his constituents' sympathy is being got up for signature.

In other words, it now looked as though Mr. Bailey's obstetrics were to receive the accolade of a public testimonial. As a matter of fact the same correspondent had pointed out as early as December, 1874 (*The Brisbane Courier*, December 25, 1874), that the inquiry at Tiaro was held, not because anyone blamed Mr. Bailey, but solely on account of the niceties of the law concerning death certificates.

I think that most obstetricians, like Professor Shedden Adam, would feel a deal of sympathy for Bailey. He was cautious and obviously experienced in the ways of women in labour, and lived for a week with the patient's family and yet resisted the urgings to do something active and probably meddlesome. If you think about it, there was probably very little he or anyone else could have done. The fault lay more in the times, the place, the character of the man, and contemporary medicine. To understand this, then, we should consider all these factors.

The Place and the Times.

The first white inhabitant of the Mary Valley was Jem Davis, of Glasgow, who received a sentence of 10 years for stealing half-a-crown from a church plate. At that time he was 11 years of age. After various vicissitudes, he escaped from a chain gang in Brisbane. One authority said that the convicts murdered each other in order to get away from the horrors of the Moreton Bay settlement. A murderer was taken to Sydney for trial and hanging, and this was said to represent a happy release. This sounds incredible. For 14 years Davis lived with a tribe that wandered through country between what is now Gympie and Tiaro. He is probably better known to you by his native name of Duramboi (meaning Kangaroo).

In May, 1842, Petrie, Superintendent of Works at Moreton Bay, set forth with Stuart Henry Russell, Joliffe (an ex-naval officer) and others in a small boat, to look for Bunnia-Bunnia pine, said to be growing plentifully on the north coast. Between what is now Maroochydore and Noosa they picked up "Wandi" (Bracefield or Bracewell or Bracefell), an escaped convict who had been living with the famed Eumundy's tribe since 1830. Years before (in 1836) the *Stirling Castle* had been wrecked in the vicinity of Double Island Point. What actually happened to the survivors is obscure—most of them, including Captain Frazer, were murdered by the blacks. However, a good deal of evidence supports Bracefell's story that he rescued Mrs. Frazer and escorted her back to the vicinity of Brisbane, and then returned to "his tribe".

The party, plus Bracefell, rowed up the Wide Bay River, later called the Mary after Lady Mary FitzRoy, and at Tiaro pounced on Duramboi-Davis—a rather reluctant and recalcitrant prodigal. If the onlookers thought that Wandi and Duramboi should have much in common, and could be induced to pass the hours in swapping tales of bush adventure, they were quickly doomed to disappointment. The two wild men of the woods hated each other on sight, were intensely jealous of each other and were with difficulty restrained from mutual violence. The savagery of the blacks prevented the party from climbing Bauple (Boppel) Mountain, which had been their object.

Joliffe was the representative of the Honourable John Eales of Morpeth on the Hunter River. Eales himself was a man of resource. He built the first grain silos in Australia — iron contraptions — and when the scoffers laughed, he declared that he would not sell his wheat—then at 1s. a bushel—until he could get 10s. for it. Into the silos it went, and in due course he got his price. However, he burnt his fingers at Wide Bay. On the return of the boat party to Moreton Bay, Joliffe brought some sheep up from New South Wales and, with Davis to guide him across the ranges, settled in the country on the Mary. He had intended to bring 16,000 head with him, but whether as many as that survived the journey there I do not know. Davis brought him to the fine big lagoons on what is now the Tiaro "swamp" and racecourse paddock. The choice was both good and bad: good, in that he picked on a few square miles of fine cattle-fattening country midst a lot of surrounding poor land; but bad, in that the district is entirely unsuitable for sheep.

Later, in 1842, Henry Stuart Russell, working overland to open up the Burnett River, found Joliffe and his sheep in a parlous condition. The shepherds on the out-station at Tiaro had been killed by blacks, who had also taken a liking to a menu of mutton, and next year, in 1843, Eales relinquished his attempt at empire-building. It is doubtful if he ever had any title to the land. The matter is of slight historical interest, because it is usually taken for granted that pastoral settlement on the Burnett preceded coastal settlement north of Brisbane. Duramboi-Davis became first a blacksmith and later a crockery merchant in George Street, and died replete with wealth in 1889. He was never a very cooperative character, and used to abuse amateur anthropologists who tried to pump him about aboriginal customs and lore.

Bracefell's final destinies were tied up with Dr. Stephen Simpson, the Land Commissioner, who built in 1842 historic "Wolston"—one of the older homes still in use in Brisbane. It is on a dairy farm tucked away between the Goodna Mental Hospital and the site for the new gaol. Here Bracefell was killed by a falling tree.

In the meanwhile, after Russell's journeys the rich pastoral lands of the Burnett were being settled, and Maryborough came into being about 1847 as a port for the area. It also was, and still is, the centre of a timber trade.

In 1847 John Eaton, an Englishman, came from New South Wales to Maryborough and took up the lands previously occupied by Eales. These comprised practically all the grazing area adjacent to the Mary River. Records state that Eaton came on the first occasion by sea, but there is a tradition among his descendants that when he finally settled he brought his wife and his numerous daughters overland in bullock drays, driving his cattle before them. At all events, Tiaro was part of his domain, looked after by a son-in-law, Thomas Cornwall. This was in accord with the Eaton pattern of encompassing the lands for miles around with properties settled by sons-in law. His only son, John Eaton, later ventured south to Sydney to study medicine, but, like other country lads before and since, the wantonness of a great city proved his undoing, and he returned after some years without his degree, with somewhat intemperate habits and with a cirrhotic liver from which he eventually died. Eyebrows were raised slightly when young Eaton treated a fractured femur to a fatal outcome without the benefit of qualified medical attention.

Early Farmers.

Eaton held the Tiaro land until 1864 when, as a result of the demand for agricultural land and the trend to closer settlement, the Mary River country was surveyed and declared an agricultural reserve and allotted to settlers. Times, however, were hard along the Mary. Almost twenty years later Bailey was to say in Parliament concerning this period: "Nothing but the most dogged obstinacy and almost stupidity on my part enabled me to hold my land until this day; and God forbid that any man should go through what I did in those early times." It was one thing to give farmers land, it was quite another thing to find crops which could be grown economically. During the American Civil War there had been a short-lived enthusiasm for cotton, but with the return of normal times to the world of trade, this had proved futile. The district was also unsuitable for tobacco. Fortunately, about 1863 Captain Louis Hope laid the foundations of the sugar industry in Queensland, and by 1870 the Mary River Valley was the largest sugar-growing area in the Colony, though the settlement on the Pioneer River, Mackay, was fast overtaking it in this regard. An author of the time in "The Queen of the Colonies" (1876) described this outpost of English civilization, this jewel of agricultural prosperity, in glowing terms. A small steamboat plied up the river to the head of navigation at Tiaro and as you journeyed onwards you saw on both sides of the river "farm after farm and plantation after plantation—verdantly green and prosperous". Some of these plantations in 1870 were just bringing their mills into production to handle some 1495 acres of cane. A fair crop had been ready in 1869, but some of the mills had not—so presumably the first large-scale planting had been made in 1867 or 1868, the ubiquitous Mr. Eaton providing many of the setts for this.

At this stage most of the great cedar logs growing in the scrubs alongs the river banks had found their way to the southern colonies, but huge pine trees were being brought down from the slopes of Bauple Mountain to the rafting grounds at Tiaro, and thence on to the sawmills at Maryborough. However, in the bad hiatus between the arrival of the first farmers and the introduction of sugar-cane as a relatively profitable crop, James Nash, very opportunely in the drought year of 1867, discovered gold at Gympie. At one stage, in 1868, there was a short-lived population of 10,000 at Gympie, but by 1875 this had settled down to about 4000. Tiaro, as a staging point on the coach road, reaped a harvest. Inman, married to Charlotte Eaton, promptly converted the homestead at Tiaro into a "pub", and the township became a centre of civil administration, and a stopping-point on the road to and from the goldfields of Gympie and, later, Kilkivan. At the time of Mrs. Trueman's death there were 300 to 400 people in Tiaro township, and some 1500 in the surrounding district.

The Man.

To this newest of agricultural districts came in about 1865 William Gill Bailey. He was born, probably in 1833, at East Teignmouth, Devonshire, the son of a medical practitioner. (According to official parliamentary records he was born in 1836, but when he died in 1889 his death certificate stated that he was 56 years old.) He was educated at Newbery and Hammersmith Public Schools, and was subsequently apprenticed as a pupil for five years to a medical man. At the inquiry at Tiaro he could produce a certificate stating that during that period he had attended about 150 confinements. He could produce another certificate from a Fellow of the Royal College of Surgeons stating: "Mr. Bailey has seen a great deal of practice both in Medicine and Surgery and has attended many hundreds of cases of midwifery." Afterwards he practised medicine at Pernambuco, Brazil, for at least four years until April, 1864. He was credited by his neighbours, at Tiaro at any rate, with having made a "considerable sum of money" from these activities. The ill health which forced him to give up medical practice in Brazil might well have induced him to settle in the happy climate of Queensland. He married Jane Nash in August, 1864, at Liverpool, and embarked shortly afterwards for Australia. His only child was born near Tiaro in 1866 without benefit of an *accoucheur*; but the nurse was stated to have been a Catherine Bailey, so perhaps an unmarried unpaid sister had been brought to the colony to help in his household. Such was the background of the first medical adviser on the Upper Mary. In the words of his obituary notice: "After he had settled on the Mary he practised medicine and in the then state of the roads his presence was a real boon to his neighbours in their time of need."

The history of this early agricultural settlement, its relative isolation, the slowness of transport and the unspectacular results obtained by orthodox practitioners of the day, all taken in combination, go far towards explaining the alacrity with which early settlers seized the services of the unqualified man on the spot and were prepared to forgive him his mistakes. You may perhaps have noted from the depositions the difficulty experienced in persuading a medical practitioner to undertake the long ride to Tiaro. At this distance in time, can we really cast blame for this? In terms of time Tiaro was then almost as far from Maryborough as Mt. Isa is from Brisbane today, and conditions of transport were immeasurably more uncomfortable. The early settlements therefore remained, to a large extent, isolated entities.

Disease Among the Kanakas: Medicine on the Mary.

No consideration of medicine on the Mary River can avoid mentioning the Kanaka problem. As Bailey once lamented in Parliament, whenever anyone had any criticism to make of the abuses associated with Polynesian labour they always dragged in the planters on the Mary, whereas, in fact, they were collectively only one of several sinners. There was something to be said for the Member for Wide Bay's contention, for at the time of the Wray-Thompson report (1880)—of which more anon—the Mary River district had only 1340 South Sea islanders out of approximately 6000 in the colony; yet anyone on censoriousness bent always made a bee-line for the sugar lands on the Mary River. "This town"—Maryborough—"has of late obtained a somewhat unenviable notoriety in connection with the Polynesian trade" ("the Queen of the Colonies").

It is no part of this lecture to discuss the rights or wrongs of the Polynesian labour question: suffice it to say that for some thirty years, until Federation did away with it, this was one of the most consistently contentious questions that occupied people and Parliament. This business of indentured coloured labour, which, according

to its opponents, had all the brutalities of slavery and none of its responsibilities, came at a time when the sails of civilization were fair set against slavery, and when a particularly bitter Civil War had just been fought to abolish it, so that it was no wonder that few were particularly happy with the experiment. As the years went on, *Hansard* gives the impression that no Government really wanted Kanaka labour; there were always outcries, prosecutions, inquiries, embarrassments—all the things that any government detests when it is backing an unpopular horse for economic reasons. However, from an historical point of view it is interesting to see how, year after year, State Parliament was determined to protect the infant sugar industry at all costs. For many years it was thought that the only way to do this was to allow it coloured labour. The well-founded idea that if you cannot grow sugar economically on our acidic coastal soils all worthwhile settlement will disappear there, is no new idea of this century, but has existed for perhaps 80 or 90 years. However, reaches of the Mary River were to friend and foe alike the acme of this new colonial agricultural era: the southern States of America transported to the antipodes, with rich planters founding family dynasties and happy darkies singing the day long. The opponents of Polynesian labour never forgave the following appearing in the "History of Australia" (A. and G. Sutherland, 1878):

> Parts of Queensland had all the appearance of the American plantations, where crowds of dusky figures, decked in the brightest of colours, plied their labours with laughter and with song, among the tall cane brakes or the bursting pods of cotton.

The reality was a bit ridiculous. Hardly more than a dozen or two large plantations on the Mary employed Kanaka labour, and the more numerous small individual farmers were almost as poverty-stricken as were the Polynesians.

However, the opponents of Kanaka labour—once the more obvious abuses, such as the "black-birding" of Bully Hayes, had been brought under some form of control—tended to use two strong arguments, each of which had a medical content. The first was physiological—that is, that a white man could do as much work as, if not more than, a Kanaka under Queensland conditions, and that there was no economic necessity for black labour. This filled pages of parliamentary debate, in which were quoted feats of strength and endurance and statistics of production; but it all proved very little. Bailey probably summed up the matter by saying that black labour was not cheap, that it was a nuisance, and that anything a Kanaka could do, a white man could do just as well. (He went on to state, however, that it was often difficult to obtain suitable white labour.) Coming from the electorate that he did, Bailey had to support the use of black labour, and indeed he once spoke in favour of bringing in workers from India. However, towards the end of his political career, while contending that the abuses were much exaggerated, he nevertheless gave the impression that he thought Polynesians were more trouble than they were worth.

The second medical argument against Polynesian labour was a very serious indictment of the whole system. The Registrar-General—a sage fellow—kept certain vital statistics relating to Polynesian labour apart from similar statistics for the rest of the community. This provided plenty of ammunition, for the Polynesian death rate was appalling. (It must, of course, be remembered that in spite of all the uproar the Polynesians caused, at no time did they number more than a little over 3% of the total population of the colony.) Plenty of records, official and otherwise, are available, but they can all be summed up by saying that at that time in the United Kingdom the death rate for a male population aged 16 to 32 years was computed at nine per 1000; whereas the average death rate, year in, year out, and from place to place, among Polynesians—a similar age group—on the Mary River was probably close to 75 per 1000. In some years and on some plantations it was much worse, but in general the average death rate was about 7·5% per year. The classical medical report on the subject was furnished as a record of an official inquiry held in 1880 by Dr. Wray and Dr. Thompson, and should be read in the original. Their general opinion was that the bulk of deaths was due to bowel infections, with the highest incidence in the summer months; but that respiratory disorders, including tuberculosis, and scurvy played a part. At one plantation where hygiene was good and the incidence of dysentery was low, tuberculosis seemed rife.

> The sick as a rule receive but poor attention. On most plantations there is a hospital; but only at Magnolia and Eaton Vale was it supplied with bedding and good blankets—but frequently it is as uncomfortable and uncared for as the other huts or houses. At one place, although three men were reported sick, the hospital was used as a tool shed; at another, although four were sick, the hospital was empty and at a third, all the bunks were occupied (8) yet the sick were dirty, poorly clothed and covered, and badly looked after, so much as to call forth our immediate condemnation. At or near none of these hospitals is there any latrine accommodation. The sick or the dying, in no matter what weather, have to expose themselves and manage as best they can and so they prefer their own places; and there in a hut whose roof was perhaps less than five feet from the ground they would be found coiled up within a few inches of a smouldering fire, and actually found, for in many instances the fact of their being sick was only made known to the manager or overseer when he discovered them as he accompanied us on our inspection.
>
> The opportunities for examining the food supplied to the hospitals were extremely few but on one plantation where 21 were reported sick, a quantity of beef tea was prepared and praised by the cook, but on examination it was found to be very unsavoury, exceedingly greasy and quite unfit for any patient suffering from any internal derangement.

Their finding was that the excessive mortality was due to poor feeding, bad water, overwork and the absence of proper care when sick.

Year in, year out, these medical statistics were quoted in Parliament and in the Press. Fulsome oratory about happy singing darkies was one thing; the hard facts of figures were another, and extremely difficult to refute. More than anything else, the inferences drawn from these vital statistics convinced more and more people that the Polynesian trade was a trade in blood. Altogether between 1863 and 1891 over 46,000 Kanakas entered Queensland, until in 1891 such immigration was abolished. However, in 1892 depression raged, and the sugar industry was faced with economic disaster. True to its traditional policy, the Government allowed resumption of indentured Kanaka labour. Supervision was more strict and deaths were fewer, but at no time between then and Federation was the Polynesian mortality rate less than four times the European rate.

The whole sorry business is not a very pretty medical story. It is easy to imagine that against such a grim backdrop an odd woman dying in labour would be part and parcel of the stark saga of early agricultural settlement, and would pass almost unnoticed. Even in Maryborough at that time, in spite of the ever-hovering wand of Aesculapius (legally qualified), it was officially admitted that "children died like flies". Life was cheap, and Charon plied a busy boat on the Mary River.

The Political Career of William Gill Bailey.

The political antics of Bailey had some influence on the reaction to Mrs. Trueman's death. The seventh Parliament, which he entered as a neophyte in January, 1874, has been said by Bernays to have been remarkable for the fact that for the first time a healthy leavening of members had been elected who did not represent the "squattocracy". He instances McLean and Grimes as farmers, and Stewart, Pettigrew, Bailey, Beattie and Hockings as representing trade and commercial interests. This was a half-truth as far as Bailey was concerned. I cannot agree that he represented trade. All his political life he was first and foremost the protagonist of a new class of colonial—the "cockatoo farmer"—the small selector who tilled his land with his own hands and got

very little out of so doing. Indeed, his extrovert character found time and inclination to brandish cudgels on behalf of a few other groups — miners, timber-getters and even the "working man". Primarily, however, he is one of the political ancestors of the modern Country Party. In the Parliament of the day he would probably have been better classed as an Independent. Force of electoral circumstances made him a difficult dose to stomach for either political party. A more sensitive man would have felt his anomalous position rather acutely, but Bailey was born to be an *enfant terrible*, and gloried in the nuisance value of his situation. Under the easy party discipline of those times he frisked around like a bull in a china shop.

Demagogues of the people, the unearthers of political rackets, the bloodhounds of the State civic, have ever intensely annoyed their contemporaries — quite understandably — and have provided some amusement for posterity. Bailey was all of these and a completely shameless parish pump politician as well. He called his Liberal leader a "sham" Liberal; he said that the policy of the Liberal Party was an insult to his constituents; but he excused his voting on party lines on the grounds that though the Liberal Party was bad, the opposition was even worse. He made no bones about his attitude that he cared nothing for political loyalties apart from loyalty to his electors. He wanted roads for them, he wanted railways, he wanted schools, and he was "agin" every penny of money spent on the metropolis. He once said the Government was becoming a "Brisbane firm" and he did not like it at all. In an era in which much latitude was allowed the individual politician in openly backing his electorate rather than his party, Bailey was so constantly parochial and sectional in his advocacy as to become notorious. He was not one wit abashed even when the House grew tired of him and told him his speeches were in bad taste.

He no doubt endeared himself to Brisbane society by saying in Parliament on at least two occasions that the cause of prostitution in the town was the poor wages paid to servant girls by members of the "Purity League"— his own designation for the colony's female "U" class. He defended the employment of barmaids, upstairs bars, publicans and sinners in general. He painted a harrowing picture of the thirst that would ensue if the "pubs" were closed on Sundays and voting days. He said that this would be yet another restriction on the working class, the number of drunkards among whom was grossly exaggerated. A working man "would be compelled to buy his bottle of whisky or rum and take it behind a log and guzzle there in a most melancholy way". He chided the honourable members for growing "too prudish and nice", and stated that they were "almost a set of Puritans in the House now". He could occasionally be "prissy" himself. On one occasion the House had spent a lot of time debating the medical examination of prostitutes and, I suspect, thoroughly enjoyed it. Bailey, as a pious afterthought in the interests of public morals, suggested that copies of *Hansard* dealing with the matter be suppressed.

Parliament had a taste of his peculiar character very early in the piece — April, 1874. Like other new private members before and since, he laboured under the illusion that election to Parliament bestowed a licence to right all the imagined wrongs of his world. He decided to rid himself of a personal chip that had apparently adhered to his shoulder for a long time. He moved to amend the *Health Act* of 1867, particularly Clause 20, which stipulated the qualifications required of a registered medical practitioner. With his usual modesty he painted a moving picture of the burden and heat of medical practice carried on by unqualified men in the out-of-the-way parts of the colony, of the lives they saved, of the good they did, of the difficulties they suffered. The honourable members admitted there was some merit in his argument. After a while, however, his Premier pointed out that Bailey's idea of amendment meant complete abolition of Clause 20. He stressed the fact that while one could alter the qualifications, one had to lay down some qualifications for a legally qualified medical practitioner. He termed Bailey's ideas "free trade in medicine". Bailey's idea seemed to be that if one practised medicine, one could take upon oneself the rights of a registered practitioner. After this exposition interest waned in the proposal, and by and large Bailey was made to look foolish. The medical profession can take some consolation from the fact that he subsequently took much the same view about legal qualifications. His argument was simple. It said: "Up to date we have laid down certain requirements for legal practitioners. What has this got for us? Nothing but roguish lawyers and immoral judges. We would therefore be better off if we did not waste our time stipulating qualifications. The result could not be any worse."

While these obvious political shortcomings and eccentricities of character must have made him at times an embarrassment to his party, his virtues made him even more prickly. By training and philosophy he was a Liberal at a time when liberalism represented a real movement for progress and toleration. What is more, he seemed to be a fanatical devotee of the theoretical tenets of his party. This must have been painful for his pseudo-Liberal colleagues. By character he was an extrovert and somewhat of a larrikin and an opportunist; by faith and in theory he was an idealist and carrier of banners. This is an infuriating combination. Its holders usually practise according to their character, expect other people to behave according to their ideals, and criticize them if they do not do so.

He was a scourge of governments trying to get an education policy "on the cheap'. He descended on schools, looked at examination papers, questioned teachers and pupils, and generally made himself *au fait* with the many illogical and ludicrous features of colonial education. He said that primary education in Queensland was a farce and school buildings were little better than hot-boxes unsuited to the climate. He wanted technical training, agricultural training, scientific training, university training. Education was his *forte*. He warned that land was the colony's capital and should be used carefully; he was against large estates. He warned against noxious weeds following in the wake of settlement. He advocated a sane immigration policy, the encouragement of secondary industry, fair wages, a just penal system, the encouragement of a self-reliant middle class. His reference to the pastoral industry as "the big boy — the favoured child of the Government" must have hurt in a parliament of those days. His speeches, when they were not pounding some constituent's grievances, were sometimes years ahead of their time. In a dim way he realized that a colony dependent on a pastoral industry only could easily develop what is now termed a "peon" economy, and this worried him. These views probably stung even more effectively than the effrontery of his fulminations when he had some obvious personal axe to grind. The rogue is at least understood and sometimes amuses; the reformer is actively disliked. Time has proved him right in a number of things.

In these years most country members had some pet railway scheme very dear to their hearts: for this they schemed, connived, wept and abused. In Bailey's case it was the building of a railway line from Maryborough to the goldfields at Gympie. He had, as well, a few lesser strings to his bow — lines to mines at Kilkivan, Mt. Perry and Burrum — but the really important undertaking was the line to Gympie. It did eventually come (1878-1881), midst thinly-veiled snarls about corruption and lost survey plans, but not before it had given the Member for Wide Bay some anxious moments. On one occasion (November, 1876), a Mr. Stevenson, in the vein of what passed for serious parliamentary debate, remarked that "he was glad to see that the Honourable Member for Wide Bay was able to articulate something again, as he believed the Honourable Member had been in a crying state for the last twenty-four hours since there were no hopes of there being a railway from Maryborough to Gympie". As a matter of fact, in the pleasantries of parliamentary debate, Bailey received as good as he gave. A Mr. Walsh, an important member, a tough character

and no emulator of the violet, remarked in 1877 that "there was no other member in the House beside himself who was so constantly attacked as the Honourable Member for Wide Bay. He had heard, however, the Honourable Member himself was a most continuous writer to papers in which he criticized the conduct of Honourable Members of the House". In 1880 Bailey was in full flow on the subject of rust in wheat (his views thereon, incidentally, have been proved correct by time), when Morehead arose and apropos of nothing in particular, said that he was glad to see that "there were quacks in other professions beside that of a doctor". Then he sat down again.

The Minister for Lands in 1882 (by then Bailey's party was in opposition in the eighth Parliament) purported to quote a reliable source who informed him as follows:

> He saw the Honourable Member for Wide Bay in the fork of a wooden plough—one of a primitive description such as used by Maoris before Europeans got among them. A horse blind in one eye. On one side there was a piece of sugaun and on the other side a bit of hay lashing for traces and the trace on one side was three inches shorter than on the other. The Honourable Member was in the fork of the plough and with that poor skeleton of a horse would go on for about five feet—then the plough would take a jump of a few feet and again penetrate the surface to a depth of an inch and turn over the weeds. He did that for a few days and then he went and held meetings for rousing the people.

Bailey later rose nicely to this bait, and stated that "although he was not a large farmer or a speculator and never had been, he had farmed in his district as decently as his neighbours. When cane was the principal crop on the Mary River he grew the prize crop, and when cane was being sold to the mills he got the highest price ever given on the Mary River. He was not ashamed of any farming he had done."

Fifteen years of parliamentary service inevitably mellowed the bush demagogue and brought him friends and influence. He could never attain ministerial rank, for his was a mind that would always be seized by the small personal injustice suffered by a petitioner; that would be easily upset by the exception that proved the law an ass; that would be rendered partisan by sectional interests and prejudices, and would be quite incapable of grasping the broad sweep of government administration. However, he was his party's whip for quite a number of years, and received a substantial presentation from his colleagues for services rendered to the party.

Some ten years after entering Parliament he was entrusted with a bill to set up a pharmacy board and regulate pharmaceutical practice. The Government had thought for some years that control of the pharmacists should be taken away from the Medical Board and vested in a board of their own, with powers of examination. A bill to legislate for this had drifted around for some years between the Assembly and the Council and had had a sorry history. The Premier said quite openly that failure to bring in any effective measure was due to the power which the medical practitioners exercised in the Legislative Council. Eventually Bailey became the pharmacists' spokesman in the Assembly, was put in charge of this legislation and eventually got it passed by both Houses. For this he was made an honorary life member of the Pharmaceutical Society. Whether his interest in this was genuine or rather activated by a desire to score off his old enemies the medical practitioners, I do not know. At all events, his was the hand that shaped the legislative side of pharmaceutical practice in this State.

He did not offer himself for election in the Tenth Parliament (June, 1888), probably on account of ill health, and he died at Qualtrough Street, Woolloongabba, on April 23, 1889. The "Upper Mary" correspondent of *The Brisbane Courier* duly paid his respects as follows (*The Brisbane Courier*, May 10, 1889).

> The news of the death of Mr. Bailey, the late member for the Wide Bay, has come quite suddenly on the people of this district. Poor Mr. Bailey had very many good points, and now that he is gone there is much regret expressed among his old acquaintances. His was a chequered career; he was brought up to the medical profession, and practised with considerable success in the capital of the Brazilian Empire, for many years. Having made a considerable sum of money, he returned to England, married, and embarked for Queensland in the year 1863. He settled on the Upper Mary, which was then proclaimed as an agricultural reserve. Mr. Bailey began to cultivate the ordinary crops of the district, but afterwards he devoted his attention to cotton, and lastly to sugar-growing, which he carried on with varied success till the year 1874, when he was returned to Parliament as member for Wide Bay.
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> After he had settled on the Mary he practised medicine, and in the then state of the roads his presence was a real boon to his neighbours in their time of need. Of course he had not complied with the requirements of the Medical Act, and anything he did was contrary to the law. He, in short, was one of the old school, but withal he had a sound knowledge of all that pertained to medicine and surgery. He was fairly educated, was a tolerably good speaker, and a valued writer for the Press. He was a staunch Liberal, and therefore a thick and thin supporter of his party. His earnestness in politics made him somewhat crotchetty and wayward, but with all peculiarities he was kind hearted and obliging.

The somewhat peculiar wording of this obituary — and perhaps some of his life's actions — may be explained by the causes of death listed on his death certificate: acute ascites, hepatitis and intemperance.

Retrospect.

Today the ambulance cruises along the bitumen of the northern highway, slows momentarily as it turns into Tiaro's long straggling street, passes the war memorial, gains pace down the hill and within half an hour is pulling up at the hospital in Maryborough. Somewhere along the route the driver with a discerning eye, if the omens are right and the mist is rising eerily from the waters of the Mary, may see the ghost of Dr. Little cantering with Trueman over the long miles in the November dawn; and he may even feel the hopeless feeling of exasperated frustration that must have entered the heart of the doctor as he faced his dying patient at 7 a.m. 83 years ago. Those of us with imagination may reflect briefly on the effect on the vital statistics of this State that a bitumen road, a fast ambulance and modern obstetrics have had.

If there is a moral to this story (and I understand that people in positions such as mine are sometimes expected to dig diligently for a moral), it is that the making of life longer, safer and healthier is a team effort. Invidious indeed it is to give the sole word of praise to one or other medical specialty, preventive or clinical; invidious indeed it is to reserve the credit to the medical profession only. I have used the death of Mrs. Trueman to infer how many people have contributed to betterment of conditions since her time. There is room for many people in our gallery of fame — obstetricians, research workers, public health specialists, legislators, educators, innumerable people whose initiative has raised the standard of living, engineers who have built highways, and even the Henry Fords of the world who have built motor vehicles. When it comes to medical practice on the individual patient, clinical medicine and preventive medicine are indivisible, and a longer, healthier life is the business of the whole community.

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"OFFICIAL RECORD OF THE DEBATES OF THE LEGISLATIVE COUNCIL."

"OFFICIAL RECORDS OF THE LANDS DEPARTMENT, EXECUTIVE BUILDINGS, GEORGE STREET, BRISBANE."

"OFFICIAL RECORDS OF THE REGISTRAR-GENERAL'S OFFICE, TREASURY BUILDING, BRISBANE."

PERSONAL COMMUNICATIONS FROM, AND INTERVIEWS WITH, DESCENDANTS OF EARLY TIARO SETTLERS.[1]

"PUGH'S QUEENSLAND ALMANAC, LAW CALENDAR, DIRECTORY, COAST GUIDE, AND GAZETTEER" for 1878.

"PUGH'S QUEENSLAND ALMANAC, LAW CALENDAR, DIRECTORY, COAST GUIDE, AND GAZETTEER" for 1879.

RUSSELL, H. S. (1888), "The Genesis of Queensland: An Account of the First Exploring Journeys to and over Darling Downs: The Earliest Days of their Occupation; Social Life; Station Seekings; the Course of Discovery, Northward and Westward; and a Résumé of the Causes which Led to Separation from New South Wales".

SUTHERLAND, A., and SUTHERLAND, G. (1884), "The History of Australia from 1606 to 1876".

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"VOTES AND PROCEEDINGS OF THE LEGISLATIVE ASSEMBLY."

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Appendix: Synopsis of Evidence Given at the Inquest.

This evidence was given at Tiaro on December 9, 1874, at the inquest held by George Faircloth, P.M., to enquire into the death of Mrs. Trueman of that district. Death had taken place on Monday, November 16, 1874.

The following witnesses were called:

Caroline Frances Biddles.

Wife of Thomas Biddles of "Home Park", Netherby via Tiaro, and sister of the deceased gave evidence. She told the following story.

On Monday afternoon, November 9, 1874, her sister, Mrs. Trueman, who was staying with her, went into labour and a Mr. Bailey was sent for and arrived in the late afternoon. Mrs. Ridgway, a local house-wife, also came to assist and stayed. Between the Monday and Thursday her sister had had fitful pains but no child was born. Mr. Bailey said that an obstructive contraction was present and counselled waiting. Mrs. Ridgway disagreed violently with this inactivity and stridently criticised him.

Early on Thursday morning Mrs. Biddles noticed for the first time that her sister had a disagreeable vaginal discharge. Nothing further happened till Saturday evening when all pains ceased. About 3 a.m. on Sunday morning Mr. Bailey sent for a medical practitioner from Maryborough. None came. A second messenger was sent in on Sunday evening. At 7 a.m. on Monday 16 Dr. Little arrived and with instruments delivered a dead child. Three-quarters of an hour later the mother collapsed and died. Mrs. Biddles considered that Mr. Bailey had shown every kindness, attention and skill.

Maria Ridgway.

Housewife of Grotchie (now Gootchie) gave similar evidence of a fitful ineffective labour till early Thursday morning when the pains became stronger and the child's head could be felt low down in the birth passages. Mrs. Ridgway considered the birth was imminent but Mr. Bailey would not hear of this. The pains later in the morning became weaker and the odour of a vaginal discharge was noted. Most of the rest of the evidence recounted her arguments with Bailey and the experience which she had had with women in labour.

She considered that some active measures should have been undertaken by the Thursday morning at the latest. She admitted, however, that Bailey had given a deal of medicine and prescribed hip baths. (There was evidence given of frequent P.V. examinations without the slightest antiseptic measures.)

William Gill Bailey.

Planter on the Mary River, near Tiaro, stated that for many years he had assisted the women of the district in their confinements, and produced certificates as to his extensive medical experience as an unqualified medical assistant both in England and Brazil where he had practised medicine. He told a straight-forward tale of a woman in labour with a cervix which was rigid and which would not dilate. Through Friday afternoon till Saturday morning the dilatation improved and he thought things were beginning to go well—(though he suspected a dead child)—until on Saturday afternoon all pains suddenly ceased. He tried to stimulate labour with ergot and when this failed he threw in his hand and sent for a medical practitioner. None came but forceps were sent out to him. He applied these but fœtid pus came away and he at once told the relatives that if he proceeded with the delivery the patient would collapse. Knowing the case was hopeless he wanted the assistance of a medical practitioner. He stated that on the Thursday he had administered Tinct. of Opium to encourage relaxation.

Joseph Henry Little.

Medical practitioner, of Maryborough, in evidence explained the difficulty in getting one of the town's practitioners to undertake the ride to Tiaro. He had been approached twice, and Dr. Lane and Dr. Ward once each. He also thought that Mr. Bailey had some kind of medical qualification and it was on account of this misapprehension that he had at first told the police that no inquest would be necessary.

He stated that the patient collapsed and died immediately after he had delivered her of a dead child. The patient's pelvis was unduly small. He believed Mrs. Ridgway's evidence and considered that the patient should have been delivered on the Thursday and, since it was impossible to do this without instruments, that was the day on which Bailey should have sent for medical assistance.

John Joseph Power.

Medical practitioner and police surgeon, Maryborough, considered that Mr. Bailey "displayed want of skill in not calling medical assistance earlier than he did" and that he showed "neglect or ignorance of the urgency of the case". The small pelvis made it a case for a medical practitioner only, since the use of forceps was indicated. He believed Mrs. Ridgway's evidence.

[1] I am particularly indebted to Mr. Percy Biddles and Mr. Frank Biddles, of Netherby, and to various descendants of John Eaton.

Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"Immunization Information for International Travel", prepared by the Epidemiology and Immunization Branch Division of Foreign Quarantine of the Bureau of Medical Services, United States Public Health Service; 1959. Washington: U.S. Government Printing Office. 4¼" × 6", pp. 78. Price: 30 cents.

"A Short Textbook of Surgery", by C. F. W. Illingworth, C.B.E., M.D., Ch.M., F.R.C.S. Ed., F.R.F.P.S. Glas., Hon. F.A.C.S., Hon. F.R.C.S. Eng.; seventh edition; 1959. London: J. & A. Churchill, Limited. 9¼" × 5¾", with 16 plates and 263 text figures Price: 45s. (English).

"The Modern Treatment of Asthma: With Special Reference to Gold Therapy", by L. Banszky, M.D. (Berlin), L.M.S.S.A. (Lond.); second edition, 1959. Bristol: John Wright & Sons, Limited. 7¼" × 4½", pp. 188. Price: 21s. (English).

"Acute Pericarditis", by David H. Spodick, M.D.; 1959. New York and London: Grune and Stratton, Incorporated. 5¼" × 8¼", pp. 192, with many illustrations. Price: $6.50.

"A Practice of Anæsthesia", by W. D. Wylie, M.A., M.B. (Cantab.), M.R.C.P., F.F.A.R.C.S. and H. C. Churchill-Davidson, M.A., M.D. (Cantab.), F.F.A.R.C.S.; 1960. London: Lloyd-Luke (Medical Books) Limited. 9" × 6", pp. 1071, with 246 illustrations. Price: 105s. (English).

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PHARMACEUTICAL BENEFITS.

THE provision of pharmaceutical benefits by the Australian Commonwealth Government has had a curious history, over which at this stage of things it may be interesting to glance. The chronicle so far is a play in three acts. The first act really got under way in 1944, when the Commonwealth Government of the day introduced its first *Pharmaceutical Benefits Act*. This did not go very far. The Government's power to bring in such an Act was the subject of litigation in the High Court of Australia set in motion by the Government of Victoria on the relation of the Medical Society of Victoria. This action was successful, and the Commonwealth Government was unable to proceed with its legislation. Then the Government referred to the people in a referendum the whole question of social services and was granted constitutional powers to legislate in such matters, with the qualifying clause, "but not so as to authorize any form of civil conscription". On the basis of these powers the *Pharmaceutical Benefits Act*, 1947, was passed and received the Royal Assent, but it also failed. The members of the medical profession, or approximately 98% of them, refused to cooperate on ethical grounds and on the question of medical freedom. As a result we were able to state in these columns on February 5, 1949, that the Act was as dead as the dodo. A significant comment followed:

> Of course the *Pharmaceutical Benefits Act* was never intended to benefit the health of the people in any way—the Minister for Health made this admission in so many words in Parliament. Had the Government really wished to promote the welfare of the people, it could have secured the cooperation of the medical profession by accepting its suggestion on the working of the Act.

The Commonwealth Government then tried again. An amending Act sought to prevent doctors from prescribing any medicament in the Government formulary except on the Government's prescription form. Most of the medical profession considered that there were good reasons for not conforming with the Goverment's requirements in this, and the amendment was tested in a High Court action. The court ruled that the amendment was a form of civil conscription and therefore invalid. The curtain fell on the first act with lightning, thunder and a change of government.

Act II introduced a new government, with a Minister for Health who not only wished to provide the Australian people with an effective health service, but also, as a medical man, understood the approach of his colleagues to the matter. He introduced in his own words, "free provision, on a doctor's prescription, of costly, specific life-saving and disease-preventing drugs, and of drugs necessary for certain chronic illnesses". The machinery for prescribing these was simple and unobjectionable, and the provision itself was constructive and particularly compatible with modern medical standards and practice. The medical profession, through the Federal Council, supported the new scheme, and it was soon working. The pharmaceutical benefits provisions of the Pensioner Medical Service, the next section of the Government's health scheme, were of a different character. They included many common medicaments and compounded preparations, originally based on the range of monographs in the British Pharmacopœia, but the list has subsequently been modified in various ways. Although everyone has not been happy about some of the clerical work involved and about the limitation on prescribing, the scheme has been worked for the sake of the needy pensioner and as applying to only a limited section of the community. The Australian health landscape was calm as the curtain fell on Act II. If there was a cloud on the horizon, it was no bigger than a man's hand.

Surprises were in store. When the curtain rose on Act III, it was August, 1959, and in the centre of the stage was, not the Minister for Health, but the Treasurer introducing his Budget. A somewhat astonished medical audience, a little but not wholly forewarned, learnt that the pharmaceutical benefits provisions were to be greatly modified and expanded. The list of drugs which might be prescribed under the scheme was to be increased, so that the doctor would have "a choice extending virtually over the whole field of drugs and medicines". On the other hand, a charge of five shillings would be made for each individual prescription. Pensioners would be unaffected; for those already so entitled, medicines would continue to be free. This somewhat vague scheme aroused much speculation and not a little misgiving in many circles, and questions began to be asked about details. The Minister for Health issued a Press statement providing more information and setting out grounds to justify the new scheme. Much of what he said was good sense, but that statement was made on August 11, 1959. Since then the Minister has discussed the matter with the Federal Council and has made a number of statements explaining and modifying the scheme; he has introduced an amending Bill into Parliament and has had it passed; but now, six months later, we still do not know the details of the scheme, and in particular, the extent of what is to be available for prescription. The scheme is to be brought into effect, we understand, on March 1, 1960. The curtain is still up, and the cloud on the horizon has grown. Whether or not it portends a storm remains to be seen. Among the players there seems to the audience to be one of those awkward pauses which suggest that someone has missed his cue or forgotten his lines. Who it is and what is happening

behind the scenes the audience can only guess. Perhaps the prompter's voice will break the silence.

The Federal Council has been by no means inactive during the recent developments and has been doing its best, not only to penetrate the bureaucratic mist surrounding the new scheme, but also to ensure that its provisions will be satisfactory both to the doctor and to his patients. If it appears to have been inactive and not to have kept the profession fully posted with details, it is because the details are still obscure. It looks to the profession as a whole to give it full support as it seeks to make the best of a difficult situation. Why the Government has seen fit to upset what was a satisfactory scheme, unique to Australia in its conception and in its wide acceptability, is still not clear. However, having decided to extend the scope of pharmaceutical benefits, the Government must see that the scope is sufficiently wide to preclude doctors being compelled by pressure from patients to prescribe against their better judgement. The new scheme will certainly not save money. The Government hopes that it will stabilize the position, but even this cannot be taken for granted. Of course the cost of provision of the life-saving and disease-preventing group of drugs will rise each year, for this is the field in which therapeutics is developing. These are the important, effective and expensive drugs, and few had any quarrel with the principle that the cost of their provision should be shared by the whole community. The five shillings charge may be a deterrent against the prescribing of unnecessary drugs, but it will not curb the really expensive part of the scheme, the provision of effective and very expensive drugs where they are really needed—at least in the interests of good medicine, we hope that it will not. Even more, we hope that it will not mean that the cheaper products of uncertain backyard factories will be preferred to the sometimes more expensive but much more reliable products of the reputable firms which accept responsibility for the very real expense of research and development in much of our current therapeutic advance. Medicine and the community as a whole owe much to the researches of the great pharmaceutical houses.

Our national health scheme so far has been a development of which we have reasonably been proud. Various flaws which were detracting from it have been remedied, though not all, and we may fairly credit the Minister for Health with a sincere desire to make the scheme effective and acceptable to all concerned. The latest developments are in many respects unfortunate, but surely not beyond mending. It is to be hoped that the Federal Council at its meeting at the end of February will be able to see some light on the horizon. Meantime the medical profession may be assured that its interests are being watched, and that a positive lead will be given to the extent that the profession shows willingness to follow. The general public may be assured that the British Medical Association, whose views are born of long study and experience of health schemes and centuries of experience of medical care, is concerned to see that this and other aspects of the development of our National Health Service conform to the highest standards of *patient care and maintenance of health.*

Current Comment.

THE AUSTRALIAN FRIENDLY SOCIETIES.

THE medical profession has always had close contact with the friendly societies, although the amount of direct contact in this country in recent years has been much less. Up to about a decade ago, a considerable number of general practitioners carried on much of their practice in continuous relation with the friendly societies, and they and others will no doubt be interested in a review of the trends of friendly society membership in New South Wales by the State Government Actuary, Mr. J. H. E. Hancock, which has been included in the report of the Registrar of the Friendly Societies for the year ended June 30, 1959. Mr. Hancock points out that these friendly societies were first established in Australia in the nineteenth century. The first was founded in 1834, primarily to provide some or all of four basic necessities for the welfare of members—namely, social and friendly activities, sickness benefits payable during periods of illness or incapacity, medical services and medicines as required, and a sum of money to defray the costs of burial, usually referred to as funeral benefits. The first enacted law relating to the societies was in 1843 and subsequent legislation encouraged and protected them. In 1908 the State Government introduced a system of government subvention to subsidize the cost of benefits, social and otherwise, to the members of the society. This action, as Mr. Hancock points out, was possibly the first attempt by a government to utilize established voluntary organizations for purposes of a State scheme of social security—an interesting foreshadowing of an essential feature of the Australian national health service. Mr. Hancock goes on to state that it has been customary to measure the basic membership of such societies by the number contributing for sick and funeral benefits, since in these and in the financial reserves accumulated to provide them lay the strength of the societies; furthermore, continuity of membership has always been measured by contribution for these two benefits. The main reason most members had for joining these societies in the past was that they provided a means of defraying costs of medical attention and medicine. Few were interested in attending lodge meetings and functions. Very few of those who because of income limits were debarred from participation in medical benefits have bothered to join these societies. As there was no other way of making provision for the costs of medical attention and medicine, the numerical strength of the societies was considerable and steadily increased till 1930. The economic depression of the 1930's made it difficult for many members to maintain their financial membership of these societies, and although the societies did their best to meet these members in their difficulties, an alarming fall in membership occurred between 1930 and 1935. From then on until after the second World War, better times brought increasing membership, but then a downward trend began. As at June 30, 1958, the total of those contributing to friendly societies for sickness and funeral benefits was about 147,000, as opposed to a peak membership of over 250,000 in 1930, and according to Mr. Hancock the rate of admission for these benefits is currently at its lowest since the movement began in Australia. A variety of other organizations provide social or club activities for the community, income levels have risen, and a spate of Commonwealth legislation has introduced, on a nation-wide basis, benefits of the kinds in which friendly societies originally led the way. Noteworthy in this regard was the *Unemployment and Sickness Benefits Act* of 1944, which provided *inter alia* for benefits payable during periods of illness. Hospital and medical benefits and the Pensioner Medical Service have all had their effect. The friendly societies have of course joined in these schemes and modified their position to suit the new era, but it appears that it is only in the field of such things as hospital and medical benefits that they

have managed to retain their position. Interest in basic sickness and funeral benefits has languished; curiously enough, this decline in interest became most evident after the general discontinuation of the medical contract service in 1951 and the introduction in its place of a fee-for-service insurance system. Mr. Hancock suggests that a new approach may be required, possibly unfettered by the customs and usage of the past, to put the societies back into the field of insurance for sickness and death benefits. The societies themselves are apparently aware of this and a change in their thinking is apparent. New book-keeping methods and a streamlined administration are being introduced. Mr. Hancock suggests various ways in which the societies might be revived in relation to their sickness and death benefits, and expresses the view that there are still avenues open into which the energies of the friendly society movement might be channelled. He considers that once the societies have recovered from the growing pains engendered by the Commonwealth schemes, a concentrated effort could produce a worthwhile addition not only to their numerical strength but also to their accumulated financial resources, in which lie their strength and ability to pass through uncertain times, such as they have encountered in the 125 years since the foundation of the first Australian society.

CHANGING VIEWS ON FIBROCYSTIC DISEASE OF THE PANCREAS.

IN English medical literature the term fibrocystic disease of the pancreas is still in general use, though it might be argued that it is obsolete on the grounds that (i) it is now generally agreed that the disease is a general one, affecting glandular structures throughout the body, and (ii) the lesions in the pancreas are an end result of a much more fundamental disease process. American medical writers tend to use the term mucoviscidosis in deference to S. Farber's suggestion, first put forward in 1943,[1] that the basic defect was an abnormal viscosity of the secretion of mucus-secreting glands throughout the body. Since D. H. Andersen published her classical study of the post-mortem findings in 49 cases of pancreatic fibrosis 22 years ago,[2] fibrocystic disease of the pancreas has emerged from the position of an obscure and little-known entity to that of a disease about which a great deal has been written and a mass of information collected, but whose ætiology is still the subject of very diverse opinions. G. B. S. Roberts[3] of Glasgow has recently made an interesting contribution to this debate. The early suggestion that the disease is due to stenosis of the pancreatic duct has now been generally discarded, though it still has a few adherents, and Roberts states that of the many other suggestions which have been put forward, all fail because they do not explain the known facts. He then lists what he considers to be the main facts which must be fitted into any hypothesis as to the basic cause of this condition; these are as follows:

1. Fibrocystic disease is a generalised disease which affects many different types of secreting glands.

2. It is characterised by excessive secretion of mucus, which is clearly seen in the small intestine in meconium ileus but almost certainly occurs also in the bronchi.

3. Brunner's glands differ significantly from the intestinal and bronchial mucus glands in that they produce a totally different type of mucus, which biochemical examination shows to be a mucoprotein instead of an acid mucopolysaccharide.

4. The mucus produced in fibrocystic disease is biochemically normal mucus. No abnormality has been noted on histochemical examination or on enzymatic hydrolysis.

5. The abnormality of excessive secretion is not confined to mucus glands as most previous workers have suggested. Secretion of sweat is excessive both in volume and in total solids. The sweat-glands, however, show no gross histological abnormality.

6. In all early cases of fibrocystic disease zymogen granules are absent from the pancreas, whose canaliculi are distended with plugs of secretion. This is the picture of sustained over-secretion by serous glandular cells.

7. The submaxillary salivary glands also show absence of zymogen granules.

His statement that the mucus produced in fibrocystic disease is biochemically normal is based on his own work, and is directly contrary to the views of one school of thought which has postulated "a structural error in a mucoprotein, similar to the molecular flaw in hæmoglobin which gives rise to the hæmoglobinopathies".[4] He considers that the abnormal viscosity of the mucus secreted is due only to an abnormally high proportion of mucopolysaccharides in the mucous gel, and points out that at least four distinct types of glands with different secretions are affected, the general picture being one of over-secretion. (He concludes from this that the basic abnormality in fibrocystic disease is persistent over-stimulation of all glands of external secretion throughout the body.) He supports his interpretation of the pathological changes in the pancreas, as being due to sustained over-secretion, by the observation that the early changes in the pancreas closely resemble those which may be induced by the experimental injection of pilocarpine.

(From this interpretation of the observed facts Roberts proceeds to the suggestion that the varied manifestations of fibrocystic disease can all be explained either by over-production of acetylcholine, or by prolongation of its action due to interference with its normal destruction.) Experimental over-production of the secretions concerned can in fact be produced by the injection of cholinergic substances. Roberts points out that all the glands involved are under the control of the parasympathetic system, and are therefore activated by acetylcholine, except the sweat glands, which are innervated by sympathetic nerves, but are anomalous in that they too are activated by acetylcholine. He suggests that the involvement of these two groups of glands with a fundamentally different anatomical innervation argues strongly against the disease being due to any anatomical abnormality of innervation as in Hirschsprung's disease, but that the fundamental defect lies in some abnormality in the humoral transmission of nerve impulses to the secretory glands. Of the two alternatives, that the secretion of acetylcholine may be excessive or that its action may be abnormally prolonged, Roberts favours the latter, and tentatively quotes two observations in its support. The first is an old statement by Farber[5] that he had induced fibrocystic disease in kittens by the injection of pilocarpine three times a day, though this has never been confirmed; the second is an observation by W. B. Ayers[6] and his colleagues that after denervation of the pancreas in five cases of fibrocystic disease, trypsin appeared in the duodenal juice very soon after operation. This at first sight seems anomalous, since the vagus stimulates the pancreas, but Roberts explains this by suggesting that the failure of pancreatic secretion is due to persistent over-stimulation, and that the reappearance of normal pancreatic ferments occurs after the gland has been rested for a while. No doubt various criticisms can and will be levelled against Roberts's hypothesis as to the basic cause of fibrocystic disease; one of its weaknesses is the apparent paucity of experimental data in its support, but if the hypothesis is sound, no doubt these will be forthcoming. Meanwhile, it appears to warrant careful attention, and may be a useful contribution to our understanding of this still baffling disease.

[1] *New Engl. J. Med.*, 1943, 229: 653.
[2] *Amer. J. Dis. Child.*, 1938, 56: 344 (August).
[3] *Lancet*, 1959, 2: 964 (November 28).
[4] Leading article, *Lancet*, 1959, 2: 955 (November 28).
[5] *Amer. J. Dis. Child.*, 1942, 64: 953 (November).
[6] *J. Amer. med. Ass.*, 1950, 142: 7 (January 7).

Abstracts from Medical Literature.

PATHOLOGY.

Glomerulonephritis of Hepatic Cirrhosis.

E. R. FISHER AND H. R. HELLSTROM (*Amer. J. clin. Path.*, July, 1959) have observed a variety of glomerulonephritis in 25% of 100 consecutive necropsies on subjects dead of hepatic cirrhosis and in one of two examples of hæmochromatosis. They state that histological examination reveals thickening of the glomerular basement membrane and lobular proliferation of glomerular nuclei—i.e., the lesion is proliferative and membranous glomerulonephritis. The authors were not able to ascribe any particular clinical features to cases in which this renal change was observed.

Pneumocystis Carinii.

W. H. SHELDON (*J. exper. Med.*, July, 1959) has found that rodents can be readily infected with *Pneumocystis carinii* if they are treated with cortisone and antibiotics alone. The same type of plasma cell pneumonia and organisms in the alveoli were found in controls treated with cortisone and antibiotics. Antibiotics and infected rabbit lung suspensions caused less marked lung changes and fewer organisms. Rare organisms and minute foci of pneumonitis were encountered in normal rabbits which had received no hormones, antibiotics or inoculum. The pulmonary lesions in cortisone-treated animals resembled the findings in patients with the subclinical form of pneumocystis pneumonitis. They did not reproduce the massive lesions of widespread pneumonia seen in infants. The author concludes that there is a latent infection of rabbits' lungs with *Pneumocystis carinii*, and that activation depends upon an impairment of host resistance, which in his experiments was produced most effectively by the administration of cortisone. He suggests some unknown defect of host resistance to account for the infection in human infants. The problem regarding the nature of the organism remains unsolved.

Survival Rates in Cancer of the Breast.

A. J. PHILLIPS (*Brit. J. Cancer*, March, 1959) has endeavoured to resolve the problem of whether or not treatment of cancer of the breast materially alters the survival rate. He studied 230 patients with untreated breast cancer and matched them with treated operable patients from the Toronto General Hospital, on the basis of age at diagnosis and age at onset of symptoms. In comparing the matched groups, it was found that the survival rate calculated from the date of diagnosis was significantly greater for treated than for untreated patients for each year to eight years. In comparing treated and untreated patients matched for age at onset of symptoms, it was found that the survival rate was consistently higher for treated than for untreated patients, but the differences were not statistically significant. It must be recollected, however, that in the main the untreated cancers were diagnosed clinically instead of microscopically, and this may have favoured the untreated group of patients by the inclusion of lesions which were actually benign.

Tumour Cells in Blood.

W. S. FLETCHER AND J. W. STEWART (*Brit. J. Cancer*, March, 1959) have attempted to determine to what extent tumour cells are filtered from the blood by the liver in patients either with primary gastro-intestinal carcinoma or with abdominal secondary deposits. Tumour cells or suspicious cells were found in portal blood in eight out of nine cases of carcinoma of the gastro-intestinal tract but in only two of the same cases in hepatic blood. There was also some evidence that tumour cells from the gastro-intestinal tract might reach the systemic circulation by the lymphatic route.

Bronchial Squamous Metaplasia in Influenza.

M. ANDRIAL (*A.M.A. Arch. Path., July, 1959*) has examined post mortem 52 subjects dead of influenzal pneumonia for the presence of squamous metaplasia of respiratory epithelium. He found epidermidization in 27 instances, of which 24 occurred in men. It was seen in subjects ranging in age from two months to 79 years, but most commonly in older age groups. The author regards this type of post-influenzal squamous metaplasia as a temporary change only. The possible relationship to carcinoma is discussed, but no new evidence is produced. The main feature of the investigation is that the tendency of respiratory epithelium to undergo proliferative changes in response to injury is more pronounced in males than in females.

Incidence of Carcinoma of Prostate.

J. BUTLER *et alii* (*A.M.A. Arch. Path., September, 1959*) examined the prostate gland from 220 autopsy subjects aged more than 50 years who had not been suspected clinically of having carcinoma of the prostate. They found carcinoma in 71 (32·2%). In 26 there was more than one focus; in 24 more than one lobe was involved and in five the entire gland was involved. The incidence was similar to that in other published series but the predominant localization in the posterior lobe in this series differed from that in other reports.

Blood Alcohol.

H. A. HEISE (*Amer. J. clin. Path., August, 1959*) records that amongst the hundreds of blood specimens he has examined for alcohol there were two in which the figure was greater than 1%. Inasmuch as 0·6% is usually fatal, he was somewhat astonished to find that the patients were very much alive, until he discovered that the doctors who collected the blood kept their syringes in alcohol. The author also recalls the cross examination in a court case in which it was pointed out that one drop of alcohol in 100 drops of blood represented 1% by volume or 0·8% by weight, and that even one-tenth of a drop of alcohol in 100 drops would give a figure of approximately 0·08% by weight. This line of thought might suggest that the use of alcohol in cleansing the skin preparatory to performing a venepuncture may contaminate the blood and raise the alcohol content significantly. The author therefore experimented by withdrawing blood from each arm of patients, one side being wet with alcohol. He found that even pouring alcohol over the arm and puncturing wet skin did not significantly alter the result of the analysis.

Lesion in Accessory Spleens.

B. HALPERT AND F. GYORKEY (*Amer. J. clin. Path., August, 1959*) have found 311 subjects with accessory spleens in 3000 consecutive autopsies upon males; 272 had one accessory spleen, 29 had two, and 10 had three or more accessory spleens (one subject had five). Most accessory spleens were at or near the hilus, but some were in the tail of the pancreas, some along the splenic artery, and one was located in the wall of the jejunum. Lesions affecting the main spleen were not always duplicated in the accessory spleen. Lesions affecting the spleen because of its anatomic structure also affected the accessory spleen. These included chronic passive hyperæmia, hæmosiderosis, thrombocytopenia, leukæmia, lymphomas and Hodgkin's disease. Granulomatous lesions such as tuberculosis and secondary neoplasms were not always reproduced. One interesting finding was the presence of islet cells inside the capsule of an accessory spleen situated in the tail of the pancreas. Accessory spleens occur in more than 10% of people and about one in six of these is found in the tail of the pancreas.

Autoantibodies against Spermatozoa.

P. RÜMKE AND G. HELLINGA (*Amer. J. clin. Path.*, October, 1959) have examined the sera of 2015 male partners of sterile couples. In about 3% spermagglutinins were present to a titre of 1 : 32 or higher. Four hundred and sixteen fertile men served as controls, and no antibodies were found in them. The authors suggest that occlusion of the vas deferens or epididymis, through absorption of retained sperm, may lead to the formation of autoantibodies. When the serum titre was high, antibodies were found in the semen as well.

Hodgkin's Disease in Children.

J. A. PITCOCK, W. C. BAUER AND M. H. MCGAVRAN (*Cancer*, September-October, 1959) have analysed 46 cases of Hodgkin's disease in children. They divided the cases into the following clinical stages: stage 1 is that in which only one group of lymph nodes was involved; in stage 2 cases two contiguous lymph node groups were involved both above or both below the diaphragm; in stage 3 cases there was generalized disease with constitutional symptoms. There was found to be a five-year survival rate of 60% and a ten-year survival rate of 35% for patients with stage 1 disease, whereas all stage 3 patients were dead within three years. Stage 2 patients were in between stages 1 and 3. There was also a correlation between the histological types and the survival rates. The most

accurate evaluation depended upon both of these features. The authors discuss their treatment, which was mainly by irradiation. By vigorously treating recrudescences they have four patients still living 10 to 33 years after diagnosis. No case of Hodgkin's disease was encountered in a child under two years of age, and any case so diagnosed is thought more likely to be one of Letterer-Siwe disease.

Vascular Patterns in Cirrhosis of the Liver.

M. R. HALES, J. S. ALLAN AND E. M. HALL (*Amer. J. Path.*, September-October, 1959) have investigated the vascular pattern in a large series of normal and cirrhotic livers by the injection-corrosion technique. In cirrhosis there was consistent enlargement of the hepatic arteries and arterial bed with an increased intercommunication between hepatic arteries and portal veins. The venous beds were reduced and often distorted, particularly the hepatic veins. This was apparently due to the fibrosis. Occasionally they found gross anastomoses between portal veins and hepatic veins in cirrhotic livers; they were seen also in some livers with severe chronic passive congestion, and in livers with focal bands of subcapsular atrophy and fibrosis. Umbilical and paraumbilical collaterals were surprisingly large and frequent in portal cirrhosis. No significant differences were noted between portal and post-necrotic cirrhosis. In biliary cirrhosis, portal venous obstruction was often more marked than hepatic venous obstruction. The authors discuss the possible genesis and physiological effects of these vascular alterations, and the probability of local retrograde flow of blood in the portal veins in those sites where the parenchymal circulation is purely arterial. They suggest that these observations contraindicate surgical ligation of the hepatic artery or arterialization of the portal vein in the treatment of portal hypertension due to cirrhosis.

THERAPEUTICS.

Diabetic Acidosis.

P. MICHON, A. LARCAN AND P. VERT (*Presse méd.*, May 16, 1959) discuss the physio-pathological background of diabetic acidosis and describe a new method of treatment. They advocate the immediate administration of lævulose solution with added electrolytes, especially potassium phosphate from the second hour, and the systematic prevention of collapse by perfusion with plasma or liquid gelatin. They state that this new form of therapy eliminates the classical complications of diabetic coma and gives good results.

2-Methyl 3-Orthotolyl 4-Quinazolone as a Hypnotic.

A. RAVINA (*Presse méd., May 2, 1959*) states that 2-methyl 3-orthotolyl 4-quinazolone (TR 495), a substance obtained during work on the production of new synthetic antimalarials, has been found to have useful hypnotic properties. When given orally in a dose of 0·15 gramme, and rectally in doses ranging from 0·15 to 0·2 gramme, in most cases it rapidly induces sleep lasting for six to eight hours. Side effects are uncommon and slight. With chlorpromazine it seems to have a better synergistic action than other hypnotics. The combination of small doses of this drug and codeine is effective in relieving nocturnal cough.

Reserpine and Hyperthyroidism.

C. DARNAUD, Y. DENARD, G. MOREAU, R. VOISIN AND Y. GAICHIES (*Presse méd.*, March 7, 1959) have studied the action of reserpine on hyperthyroidism. They state that this aspect of reserpine is of special interest, because it makes possible not only the relaxation of nervous tension, but also a reduction in tissue oxidation, lowering of the basal metabolic rate and restoration of nutritional balance. These clinical findings, put forward by the authors as early as 1954, are supported by experimental work showing the multiplicity of sites of action of the drug. From the practical point of view, the antithyroid action of reserpine is not sufficiently strong for it to be used alone. However, when it is combined with synthetic antithyroid drugs, the resulting treatment is very effective.

Pentaerythritol Tetranitrate, "Recordil" and Iproniazide in Angina of Effort.

H. A. DEWARE, A. R. HORLER AND D. J. NEWELL (*Brit. Heart J.*, July, 1959) report a controlled double blind clinical trial of pentaerythritol tetranitrate, in doses of up to 180 mg. per day, a khellin derivative ("Recordil") and iproniazide in angina of effort. The three drugs were compared with dummy tablets and assessment was based on patients' daily report cards on which they tried to assess the amount of pain, "same as usual", "less than usual (good day)", "more than usual (bad day)", and "no pain at all". The authors found no significant differences between any of these drugs and dummy tablets. As shown in previous similar trials, a significant proportion of patients reported definite improvement with placebo tablets.

Corticosteroids in Rheumatoid Arthritis.

D. H. NEUSTADT (*J. Amer. med. Ass., July 11, 1959*) discusses corticosteroid therapy in rheumatoid arthritis. It is agreed that corticosteroids are useful in the treatment of active rheumatoid arthritis when other measures have failed. The author states that prednisone and prednisolone are superior to cortisone or hydrocortisone on account of the reduced tendency to sodium and fluid retention and potassium loss. However, in all cases abrupt withdrawal of corticosteroids carries the risk of inducing a severe hypoadrenal state. In this review 69 patients were observed, of varying ages and severity of disease. Forty-eight patients received prednisone or prednisolone, some for as long as three years. Methyl prednisolone was given to 39 patients and triamcinolone to 38 patients. All preparations were given orally at five to six hour intervals, near meal time and at bed time. Increase or decrease of the preparation used was made by 1 or 2 mg. amounts at intervals of five to 10 days. Adequate suppression of disease activity was obtained with 5 to 20 mg. of prednisolone daily. All the preparations used were effective up to a point and no preparation could be selected as best. Characteristic toxic or side effects were recorded with all the preparations used. Moon face, hirsutism, acne, peptic ulcer, emotional disturbances, glycosuria, or ecchymoses occurred in a certain number of patients with each preparation. Triamcinolone caused marked weight loss and muscle weakness. A new analogue, dexamethasone, was given to 40 patients for six months in doses of 0·75 mg. to 2·75 mg. It was an effective anti-inflammatory agent, but caused increased appetite and gain of weight averaging 10 lb., and the drug had to be withdrawn in several cases. Increased fatigue, weakness, sleepiness and insomnia were also described. Mental symptoms were rarer with the newer corticoids.

Triacetyloleandomycin.

M. LEFEBVRE *et alii* (*Canad. med. Ass. J.*, March 1, 1959) report on the use of triacetyloleandomycin, a new derivative of oleandomycin. The drug was given to 66 patients with various types of localized or soft-tissue infections. It was administered orally, either in capsules or in a suspension. The authors state that triacetyloleandomycin is rapidly absorbed and gives high levels of antibiotic activity in the blood. They found that a total daily dosage of 1·2 to 1·5 grammes in an adult controlled a majority of infections caused by strains of *Staphylococcus aureus* resistant to other antibiotic agents in common use. They state that triacetyloleandomycin is excellently tolerated, gives rise to few side effects, which are all minor, and has not been observed to produce any toxic manifestations. The authors summarize the results reported by other workers with this antibiotic, which was first mentioned in 1957.

Hydrochlorothiazide.

V. VERTES AND M. SOPHER (*J. Amer. med. Ass.*, July 11, 1959) describe clinical studies on the antihypertensive and metabolic effects of hydrochlorothiazide. Ten patients with stable essential hypertension without œdema, and one patient with severe congestive heart failure were studied. The patients were given 50 mg. of hydrochlorothiazide three times a day. The patients lost weight owing to diuresis, but regained their weight in a few days. In all patients the blood pressure fell considerably while they were in hospital on a sodium intake of one gramme daily, but in no case did the blood pressure fall below normal. The average fall in blood pressure varied considerably. There were marked falls in serum sodium and chloride levels, but only a slight fall in the serum potassium content. After the patients' discharge from hospital and return to a general diet, while they continued to take the same dose of hydrochlorothiazide, sustained sodium and chloride diuresis and blood pressure reduction persisted with only minor changes in potassium and water excretion. One patient required supplementary electrolytes while in hospital, because of weakness, but other patients did not.

British Medical Association.

QUEENSLAND BRANCH: ANNUAL MEETING.

THE annual meeting of the Queensland Branch of the British Medical Association was held at British Medical Association House, 88 L'Estrange Terrace, Kelvin Grove, on September 12, 1959, DR. S. A. MCDONNELL, the President, in the chair.

ANNUAL REPORT OF THE COUNCIL.

The annual report of the Council for the year ended June 30, 1959, was received and adopted. The report is as follows.

The Council has pleasure in presenting the sixty-fifth annual report of the work of the Branch for the year ending *June 30, 1959.*

Membership.

The membership of the Branch is 1329 plus six honorary life members, as against 1292 and four honorary life members *in 1958, making a total gain of 39.* There are also 54 honorary associate members, 23 of whom were elected this year. Ten honorary associate members were elected to full *membership on graduation.*

The gains were: new members, 56; transfers from other Branches, 50; *member reinstated,* 1; *members reelected,* 5. The losses were: members transferred to other Branches, 52; deceased, 9; resigned, 9; struck off, 2 (owing to non-payment of subscription); suspended, 1.

The following, by virtue of their fifty years' membership *of the British Medical Association, have become honorary* life members: Dr. A. B. Carvosso, Dr. Ernest Culpin, Dr. L. Bedford Elwell, Dr. Mervyn S. Patterson, Dr. C. P. Sapsford and Dr. Charles E. Williams.

Obituary.

It is with deep regret that we record the deaths of the following distinguished members:

Dr. George William Cardew Macartney was born in Brisbane on January 2, 1887, and was educated at the Armidale School and the University of Sydney. He graduated in 1910, and after a period as resident medical officer at Sydney Hospital joined Sir Earle Page in practice at Grafton. In the first World War he saw extensive service in Gallipoli and also in France, where he rose to command the Tenth Field Ambulance, was awarded the Distinguished Service Order and was twice mentioned in dispatches. At the outbreak of the second World War he was D.D.M.S. in Queensland and subsequently commanded the 2nd/12th Australian General Hospital in Colombo for over three years. He moved to Brisbane in 1921, and apart from the war years continued to practise on Wickham Terrace until his death.

Dr. Harold Crawford was born at Kerang, Victoria, on January 5, 1891, and was educated at Doncaster State School and New College, Box Hill, Victoria. He graduated from the University of Melbourne in 1915, and served as registrar and assistant superintendent of the Melbourne Hospital. During the first World War he served with the Australian Light Horse in the Middle East and, on demobilization, came to Queensland and commenced practice at Chinchilla. Following post-graduate studies in London, he commenced specialist practice on Wickham Terrace in 1928, and commenced his great work in the cause of orthopædics and physiotherapy. He held appointments as general surgeon and later as orthopædic surgeon at the Brisbane Hospital, and was appointed senior orthopædic surgeon at the Brisbane Children's Hospital in 1938. He was untiring in his public work for the University of Queensland, the Spastic Children's Welfare League, and the St. Andrew's War Memorial Hospital, to name but three of his many activities.

We also record with deep regret the deaths of Dr. F. J. Booth, Dr. F. C. B. Hittman, Dr. K. J. Hill, Dr. G. F. Cherry, Dr. A. J. Reye, Dr. C. A. Thelander, and Dr. W. Wallis Hoare, who was an honorary life member.

Council.

Twenty-seven meetings of the Council have been held since June 30, 1958, four being special meetings. Twenty-two of these meetings were in the present Council year. Record of attendance is as follows:

Dr. S. A. McDonnell (President)	23
Dr. Paul W. Hopkins (President-Elect)[1]	11
Dr. L. A. Little (Past President, Chairman of Council)	22
Dr. W. D. Friend (Honorary Secretary)	22
Dr. D. P. Sapsford (Honorary Treasurer, Federal Council Representative)	22
Dr. A. E. Lee (Federal Council Representative, Councillor)	22
Dr. Charles Roe (Chairman of Subcommittees, Councillor)	22
Dr. Robert Miller (Honorary Secretary of Subcommittees, Councillor)	24
Dr. E. W. Abrahams (Councillor)[1]	17
Dr. J. R. Adam (Councillor)[1]	21
Dr. B. N. Adsett (Councillor)	17
Dr. G. R. Anderson (Councillor)[1]	19
Dr. A. H. B. Clarke (Councillor)[2]	7
Dr. N. C. Davis (Councillor)[3]	18
Dr. C. E. Elliott (Councillor)[4]	18
Professor D. Gordon (Councillor)	20
Dr. I. G. McPhee (Councillor)	25
Dr. K. S. Mowatt (Councillor)	22
Dr. H. S. Patterson (Councillor)[5]	13

Scientific Meetings.

In addition to the annual general meeting, ten ordinary general meetings of the Branch were held, including the Jackson Lecture, the E. S. Meyers Memorial Lecture and three clinical meetings. The average attendance at the general meetings was 30.

Details of meetings are as follows:

July: "The Surgical Approach to Parkinson's Disease", Dr. K. G. Jamieson and Dr. J. M. Sutherland.

August: "The Challenge Ahead", Dr. L. J. Jarvis Nye (second E. S. Meyers Memorial Lecture, held in association with the University of Queensland Medical Society).

September: Meeting in conjunction with the Medico-Legal Society of Queensland, at which matters of medico-legal interest were discussed.

October 3: "Fifty Years in General Practice", Dr. Mervyn S. Patterson (twenty-eighth Jackson Lecture).

October 31: Clinical meeting in conjunction with the Mater Misericordiæ Hospital Clinical Society.

February: Clinical meeting in conjunction with the South Brisbane Hospital Clinical Society.

March: "Recent Advances in Therapeutics", Dr. J. M. Sutherland.

April: "Impressions of Overseas Visit", Dr. Ellis Murphy.

May: Clinical meeting, in conjunction with the Brisbane General Hospital Clinical Society.

June: "Small Bowel Dyspepsia", Dr. K. J. Dorney (at Townsville).

Office Bearers and Councillors.

The following office bearers were appointed by the Council for 1958-1959: Chairman of Council, Dr. Alan E. Lee, who subsequently resigned and was succeeded by Dr. L. A. Little; Honorary Treasurer, Dr. D. P. Sapsford (reelected); Chairman of Subcommittees, Dr. Charles Roe (reelected); Honorary Secretary of Subcommittees, Dr. Robert Miller (reelected); Honorary Librarian, Dr. N. C. Davis, who resigned from Council during the year and was replaced by Dr. E. W. Abrahams.

Dr. Paul W. Hopkins was elected to the position of President-Elect, Dr. W. D. Friend was reelected Honorary Secretary, and, in accordance with the by-laws, the following were elected members of the Council for a period of two years, 1958-1960: Dr. E. W. Abrahams, Dr. J. R. Adam, Dr. G. R. Anderson, Dr. Robert Miller, Dr. K. S. Mowatt, Dr. H. S. Patterson, Dr. D. P. Sapsford.

[1] Elected August 30, 1958.
[2] Appointed to Council March 24, 1959.
[3] Resigned March 13, 1959.
[4] Appointed to Council September 26, 1958.
[5] On leave from January 23, 1959.

Representation.

The Branch was represented as follows during the year:

Council of the British Medical Association: Professor B. W. Windeyer.

British Medical Association, Representative Meeting, Edinburgh, July, 1959: Delegates, Dr. A. P. Crawford, Dr. W. K. R. Mackenzie, Dr. H. S. Patterson.

Federal Council of the British Medical Association in Australia: Dr. Alan E. Lee, Dr. D. P. Sapsford.

Australasian Medical Publishing Company Limited: Dr. Alan E. Lee (director), Dr. H. W. Horn, Dr. J. G. Wagner.

Medical Assessment Tribunal: Dr. L. A. Little.

Medical Board of Queensland: Dr. F. W. R. Lukin, Dr. S. A. McDonnell, Dr. J. G. Wagner.

Medical Officers' Relief Fund (Federal), Queensland Committee: Sir Kenneth Fraser, Dr. S. A. McDonnell, Dr. W. H. Steel.

Federal Medical War Relief Fund, Local Committee of Management: Dr. J. G. Wagner (chairman), Dr. B. L. W. Clarke, Dr. Charles Roe, Dr. W. H. Steel.

Medical Services State Committee of Inquiry: Dr. H. W. Horn, Dr. G. V. Hickey (senior), Dr. H. S. Patterson, Sir Kenneth Fraser.

National Safety Council of Australia (Queensland Division): Dr. S. A. McDonnell.

Physiotherapy Board of Studies: Dr. I. G. McPhee.

Post-Graduate Medical Education Committee: Dr. G. R. Anderson, Dr. L. A. Little, Dr. K. S. Mowatt.

Queensland Bush Children's Health Scheme: Dr. H. W. Anderson.

Queensland Bush Nursing Association: Dr. L. Bedford Elwell.

Queensland Health Education Council: Dr. W. J. Saxton.

Queensland Institute of Medical Research: Dr. D. A. Henderson.

Queensland Radium Institute: Professor D. Gordon.

Red Cross Blood Transfusion Service Committee: Sir Kenneth Fraser.

Royal Flying Doctor Service of Australia: Dr. C. E. Elliott.

Surf Life Saving Association of Australia (Queensland Branch): Dr. Roger A. Bennett.

University of Queensland, Faculty of Medicine: Dr. W. J. Saxton.

University of Queensland, Pharmacy Course Committee: Dr. A. Gordon Grant.

University of Queensland, Standing Committee for the Diploma of Psychological Medicine: Dr. Gregory B. V. Murphy.

Filled Milk Act (1958) Advisory Committee: Professor D. Gordon.

The Editor of THE MEDICAL JOURNAL OF AUSTRALIA was represented by Dr. Felix Arden.

Council acknowledges with thanks the reports received from Branch representatives on these bodies.

Library.

It is pleasing to note a substantial increase in the number of members making use of the library facilities. From July, 1958, to June, 1959, six hundred and fourteen (614) journals and textbooks were borrowed by members and other medical and scientific libraries, an increase of 32% on the previous twelve months, and this does not include those who visit the library to read and study.

In addition to fifty-one journals, the library receives "British Surgical Practice", "The Medical Annual", "The Harvey Lectures", "Index Medicus", "Current List of Medical Literature", Year Books on twelve different subjects and other clinical reports.

New library rules have been drawn up, enabling members to borrow unbound issues of journals one month after date of receipt from the publishers, and also making the library available to members during the evenings and at week-ends, on application to the Secretary.

Donations of books, journals and monographs have been received during the year from Dr. B. B. Barrack, Dr. R. S. Bennett, Dr. F. Garrett Scoles and Dr. Brian G. Wilson; the General Practitioner Group and General Surgical Section of the Branch; the Queensland Sections of the Australian Society of Anæsthetists, the Australian Association of Psychiatrists and the Ophthalmological Society of Australia; The Queensland Faculty of the Australian College of General Practitioners; the New South Wales Branch, the Editor of THE MEDICAL JOURNAL OF AUSTRALIA; and Messrs. W. Ramsay Surgical (Queensland) Pty. Ltd.; to all of whom the Library Committee, on behalf of the Association, expresses its sincere thanks.

The continued cooperation and assistance received from other Branches and medical and scientific libraries throughout Australia, from the libraries of the British Medical Association and the Royal Society of Medicine in London, and from the National Library of Medicine, Washington, D.C., has also been much appreciated.

The memorial section, established from funds donated by the Society of Returned Medical Officers, now contains forty-eight books, and a commemorative plaque has been erected in the library.

Many members have availed themselves of the photocopying service, and some 978 copies were supplied in the past twelve months. It is regretted that owing to rising costs it was necessary to increase the charge to 1s. 3d. per sheet.

An important addition in Robb and Smith's "Operative Surgery" (eight volumes) is now available, and many new books, selected on advice received from the various sections within the Branch, are now on order. As these become available, they will be notified to members in the *Newsbulletin*.

The duties of Honorary Librarian have been carried out by Dr. Felix Arden from July to September, 1959, by Dr. Neville C. Davis from September, 1958, to March, 1959, and by Dr. E. W. Abrahams from March, 1959.

Building and Maintenance Committee.

Personnel: Dr. A. D. A. Mayes (chairman), Dr. G. R. Anderson, Dr. B. L. W. Clarke, Dr. L. J. J. Nye, Dr. D. P. Sapsford, Dr. Donald Watson.

Two meetings of the Committee have been held during the year. As envisaged in last year's report, the Committee's main attention has centred on improvements to the drives and parking area at the rear of the building. These have now been surfaced with bitumen, and the bank between the two drives has been terraced and stocked with plants. Following flooding due to the heavy rains at the beginning of the year, it was necessary for the rainwater drains to be excavated and cleaned and diverted to a new outlet. This unexpected additional work involved the Branch in considerable expense, but should avoid any further flooding in the future.

Some painting will shortly be necessary to the exterior of the building, and, as finance permits, additional terracing and development of further parking space in the grounds at the rear of B.M.A. House will be undertaken. It is hoped eventually to provide an exit drive through into Herston Road.

The great improvement in the appearance of the gardens and grounds is largely due to the untiring efforts of Dr. A. D. A. Mayes, Honorary Curator of the Grounds, to whom the thanks of the Branch are extended.

The Committee wishes to record its appreciation of the work done by Dr. L. J. J. Nye, who, as its previous chairman since 1955, was very active in the negotiations for acquiring B.M.A. House and in launching the Building Fund.

Ethics Committee.

The following were reelected members of the Ethics Committee at the last annual meeting of the Branch: Dr. J. J. Power (chairman), Dr. N. L. Sherwood (honorary secretary), Dr. B. L. W. Clarke, Dr. F. W. R. Lukin, Sir Alexander Murphy, Dr. L. J. J. Nye, Dr. W. H. Steel.

Four meetings of the Committee were held during the year.

Organization Committee.

Personnel: Dr. Charles Roe (chairman), Dr. Robert Miller (honorary secretary), Dr. E. W. Abrahams, Dr. J. R. Adam, Dr. I. G. McPhee.

The Committee continued to meet during the year on the Tuesday preceding ordinary meetings of Council in order to deal with correspondence and matters to be referred to Council, and to make recommendations where policy was not involved.

Medical Fees Tribunal.

Personnel: Dr. A. E. Lee (chairman), Dr. B. N. Adsett, Dr. D. P. Sapsford (honorary secretary), Dr. N. L. Sherwood, Dr. D. C. Jackson, Dr. J. G. Wagner.

Three cases were submitted for adjudication during the year and were then referred to Council for the necessary action.

Jackson Memorial Lecture.

This lecture is delivered annually in memory of the late Ernest Sandford Jackson, and is usually on a subject of historical interest.

The twenty-eighth Jackson Memorial lecture was delivered by Dr. Mervyn S. Patterson on October 3, 1958, at the Lecture Theatre, Medical School, Herston, the title being "Fifty Years in General Practice".

E. S. Meyers Memorial Lecture.

The lecture was established in 1957 in memory of the late Errol Solomon Meyers, and is given each year in conjunction with the University of Queensland Medical Society.

The second E. S. Meyers Memorial Lecture was delivered by Dr. L. J. J. Nye on August 1, 1958, at the Lecture Theatre, Medical School, Herston. The title of the lecture was "The Challenge Ahead".

Memorial Prizes, 1958.

The following prizes for 1958 have been awarded upon the recommendation of the Faculty of Medicine of the University of Queensland, and it is hoped that they will be presented by the President at the annual meeting to be held on September 12, 1959.

Memorial Prize of the Queensland Branch of the British Medical Association: Iris Maureen Duke, M.B., B.S., University of Queensland, 1958.

Harold Plant Memorial Prize: Alan Harold Waters, M.B., B.S., University of Queensland, 1958.

British Medical Association Memorial Roll.

The British Medical Association Memorial Roll commemorates the services of former distinguished members of the Queensland Branch of the British Medical Association.

According to custom, the names appearing on the Memorial Roll of the Branch were read by the President at the annual general meeting held on August 30, 1958.

During the year the names of George William Cardew Macartney and Harold Crawford were inscribed on the Memorial Roll of the Association by unanimous decision of Council. These names of distinguished members were submitted to Council by a convention of past presidents of the Branch, which meets annually for this purpose.

Medical Students' Loan Fund.

Personnel of Committee: Sir Alexander Murphy, Professor H. J. Wilkinson, Professor J. H. Tyrer, Professor Douglas Gordon and a representative appointed by the University of Queensland Medical Society.

This fund was established to help needy students in the later years of their course. During the year one student was granted financial help to aid in the completion of his studies.

Federal Council.

Two meetings were held during the year, at which the Branch was represented by Dr. A. E. Lee and Dr. D. P. Sapsford.

The Council and the Association sustained a tragic loss in January by the death, after an accident, of its Assistant General Secretary, Dr. Angus McNeil. At the March meeting the Council appointed Dr. C. J. Ross Smith to the vacancy. He is a Sydney graduate, who has had a long and responsible experience overseas with the International Refugee Organization.

The principal matters dealt with during the year concerned the overseas subscription and relations with the Parent Body, various problems in the National Health Service, and Repatriation matters.

A great deal of anxious thought has been devoted to Australia's relations with the Parent Body, apart from the relatively trivial matter of a proposed increase in the subscription for overseas members.

When responsible members of the British Medical Association Council, and some of its senior administrative officials, state candidly that Australia has now grown up, and should look after its own affairs, it is little wonder that Dr. Hunter has been directed to make preliminary investigations into the problems associated with forming a Medical Association of Australia.

While in general the operations of the National Health Service are proceeding satisfactorily, the regulations associated with the setting up of the Special Account have produced some difficulties, on which the Federal Council has made representations to the Minister. These have related to the difficulty experienced by contributors who are suffering from acute illness but placed in a hospital which is not recognized by the Commonwealth for the payment of benefit from the Special Account. The main problem associated with medical benefits concerns the gap which is developing between the combined benefit available and the fee charged. The Federal Council has prepared and sent to the Minister a detailed statement relating to this, and has detailed the scheduled benefit for each item that would be required to keep the average direct payment by the patient in the region of 25%.

A unique event during this year has been the opportunity given to the Federal Council to act as hosts to the Council of the World Medical Association during their meeting in Sydney immediately after the meeting of the Federal Council. This was a most successful occasion, and enjoyed equally, it would seem, by the guests and the hosts.

The new agreement with the Repatriation Department concerning medical treatment for deceased soldiers' dependants came into force during the year. The last two years have seen a complete change in the profession's relations with this once very difficult department, and a new era of cooperation has dawned.

In all Federal matters of medical interest, the good relations existing with the various Ministers of State have allowed a real and continuing partnership to be maintained, to the great advantage both of the public and of the medical profession.

Australasian Medical Publishing Company Limited.

This company, which is wholly owned by the British Medical Association, has had an active and prosperous year. Extensions to the building and plant, made at a cost of £100,000, were in full operation, with a corresponding increase in the printing orders that could be fulfilled.

The profession is now able to reap some of the benefit of this very fortunate business activity, since the directors decided at their March meeting that next year payment by the Branches for the provision of the Jounal should be only 5s. per member, all of which would go towards the Building Fund, and debentures to this amount would be issued to the Branches.

The effect of this decision is that the Journal will be provided free to members, while the 5s. capitation rate will be a loan by the Branches for building extensions. Members will have noted that from July 1 the Journal has placed its table of contents on the front cover, and the change has been favourably received.

When the World Medical Association Council met in Sydney, a lunch was tendered to its members by the directors, and this was followed by a tour of The Printing House, and the unveiling by the Chairman of Directors, Sir Henry Newland, of a plaque commemorating the services of the Journal's late Editor, Dr. Mervyn Archdall.

Medical Benefits Fund of Australia.

The Queensland division of Medical Benefits Fund of Australia commenced nine years ago as the direct result of British Medical Association action, and has been controlled since by an Executive Committee, the majority of whom are doctors elected by the medical members of the company, with additional representatives of the contributors. After its initial struggles, its development has been continuous, and it now fills the major role in medical and hospital insurance in Queensland.

Last month it completed the distribution of ten million pounds in benefits, and at the present time distributes 92% of all hospital benefits and over 80% of all medical benefits in the State.

The present year has presented great administrative difficulties, due to the operation of the Special Account, some of the features of which, though dictated by the Federal Government, have been blamed by the public on the Fund. These matters are gradually being straightened out, and the favourable features of the Commonwealth guarantee should soon become obvious.

During the year the Fund also modified its by-laws, so that contributors in the public hospitals would be paid a reduced benefit. This has long been desired by doctors, but its implementation has proved very difficult. While competitors attempted to capitalize on this benefit reduction, to our disadvantage, it is pleasing to know that they have now all followed our lead in the reduction of public hospital benefits. The efforts of the State Government to collect some hospital insurance from public ward patients under the

guise of sub-intermediate beds, while maintaining the letter of free public hospital treatment, has also been a matter of concern to the Executive Committee, as it has also been to the British Medical Association Council.

The Committee has determined that the distinction between public and private patients depends on more than their mere labelling, and is maintaining the position that sub-intermediate beds are public beds where a charge is made.

Health insurance will continue to play such a part in the lives of doctors, that every member of the British Medical Association should become without delay a medical member of the Medical Benefits Fund of Australia.

Rehabilitation Services.

Last year the Council of the Branch was active both in approaches to the State Government and also, through the Federal Council, to the Commonwealth Government, in an attempt to establish rehabilitation departments in relation to large public hospitals.

The State Government expressed interest, and the Minister for Health announced his intention to act in this matter.

The approach to the Federal Government, asking for finance for these projects, was not productive of any immediate action owing to the approaching election.

Further reminders have been sent, and there is some prospect that action will be taken on the lines suggested by the Federal Council.

Organization of the Medical Profession in Australia.

Up to the present time the doctors of Australia have been organized in Branches of the British Medical Association, with a coordinating Federal Council of Branches in Australia. This organization has been conspicuously successful, so that the letters B.M.A. have long denoted a formidable organization acting to protect medical interests, and to advance the art and science of medicine.

Periodically, for various reasons, there have been suggestions that the tie with the Parent Body should be severed, and replaced by an autonomous Australian Association.

The present is the latest of these times. Though the trigger that fired the present reaction might have been a decision on the part of the Parent Body to increase subscriptions to overseas members (as also to home members), it is believed that no member would like to base a change of organization on such a paltry financial basis.

Your Council is confident that every member will pay willingly any proper increase that the Parent Body sees fit to decide.

Resulting from these discussions, however, it appears that there is a considerable body of opinion, both here and in England, which believes that Australia has reached a stage in its development where its doctors can look after their own interests. This has led the Federal Council to direct its General Secretary to make preliminary investigations into the practicability of such a move. The various Branches of the British Medical Association in Australia have substantial assets, and a major problem is whether they are transferable to a new and independent body.

It is too soon yet to seek any expression of opinion from members, and it may yet be the case that doctors may think their interests are better served under the flag of the B.M.A. than of a fledgling M.A.A.

Commonwealth Health Insurance Council.

The British Medical Association has long insisted that the problems facing the Federal Government in relation to its National Health Service are such that it requires the services of a standing committee of experts to tender it periodical advice.

Such a body was provided in the McKenna *Health Act*, and had one or two meetings, but was not included in the *National Health Act* of the Menzies Government.

At the insistent request of the Federal Council, a Federal Health Advisory Council was set up two years ago, with representation nominated by the registered funds, the Commonwealth and the Federal Council. It still took nearly two years before the Minister could be induced to call it together, but on March 12 and 13 a very successful meeting was held in Canberra, at which Dr. A. E. Lee represented the Federal Council.

The departmental officers seemed impressed by the quality of the advice offered, and it is hoped that this Council will now become part of the regular machinery of the National Health Service.

Sections for the Study of Special Branches of Medical Knowledge.

Orthopædic Section.

The members of the Orthopædic Section met on several occasions during the year. The business discussed was to do mainly with Australian Orthopædic Association matters.

The Meehan Memorial Lecture for 1958 was delivered by Mr. John Hoets of Sydney on "Smith-Petersen—the Man and His Work".

The Section intends to institute clinical meetings at regular intervals at the three major hospitals in 1960.

JOHN GALLAGHER,
Honorary Secretary.

Pædiatric Section.

The activities of this Section during the past year consisted of two clinical meetings held respectively at the Brisbane Children's Hospital and the Mater Misericordiæ Children's Hospital. A number of short business meetings were held, at which matters pertaining to pædiatric interests were discussed.

The chairman of the Section is Dr. P. Alan Earnshaw.

D. CLARK RYAN,
Honorary Secretary.

Radiological Section.

Four clinical meetings have been held, two of them being combined meetings with psychiatrists and neurosurgeons respectively.

Three candidates have passed the examination for membership of the College: Dr. W. J. Matthews, Dr. V. K. Clifton and Dr. B. Kynaston. Dr. Kynaston gained first place in the radiotherapy section.

Dr. Keith Mowatt has been appointed an observer at radiotherapy examinations.

The question of fees has caused the Section concern, as these have not been collected from patients in intermediate and private beds in government hospitals. Council has reached an agreement with the Minister on this matter, though it has yet to be implemented.

General Surgical Section.

After a lapse of several years, the General Surgical Section of the British Medical Association was re-formed towards the end of 1958, and at present its financial membership stands at forty-five (45). All registered general surgeons are eligible and encouraged to join, as the Section provides a forum for discussion of matters surgical, both clinical and medico-political. Subscription is 10s. per year.

The present office bearers are: President, Dr. Evan Thomson; Honorary Secretary, Dr. W. D. Friend; Honorary Treasurer, Dr. K. W. Vandeleur.

W. D. FRIEND,
Honorary Secretary.

Salaried Medical Officers' Group (British Medical Association).

The Group's third annual report was presented at the annual meeting held on February 27, 1959.

During the year, at committee meetings, many subjects were discussed. Below is a brief survey of the present position in the more important aspects of our activities.

Membership: This is very unsatisfactory, and one wonders at the poor attendance at annual meetings and lack of activity on any but committee level. There are sixty-two (62) financial members, these few out of four hundred (400) potential and benefiting members.

Study Leave: After negotiations at highest levels, there appears no prospect of any satisfactory scheme for members receiving any adequate (six months or more) study leave except at their own expense.

Libraries: Unfavourably received by the Minister, and it would appear that only some competition for classification as teaching hospitals will ever put this right.

Leave with Pay for Higher Examinations: Satisfactory; three days' leave with pay may be granted for the purpose of sitting for higher degree examinations.

Salaries: The Public Service rise recently foreshadowed will have to be received by us, or the entire basis for the foundation of this Group will collapse. Unfortunately we have to wait and see and, as in the past, lose pay for a considerable period—a tactic that has cost us thousands in the past, but short of undignified behaviour, one that we are susceptible to.

Superannuation: In spite of promises from high authority, it is not reality, and the matter is being fought at the highest level.

Air Travel Insurance: Satisfactory cover now exists.

Legal Representation for Salaried Doctors: This is being investigated.

Two convocations have been attended by your Committee. At them some of the above matters have been discussed. At one of these we obtained guarantee that when the British Medical Association Council negotiates with outside bodies on a subgroup matter, the subgroup will have a satisfactory influence in that negotiation.

The Committee elected for the following year is: Dr. E. W. Abrahams, Dr. R. L. Doherty, Dr. R. D. Gordon, Dr. J. J. Herron, Dr. W. J. P. Woolcock.

We express appreciation of the valuable services that Dr. A. Knyvett has given the group as secretary in 1957 and as coopted committee member of 1958. Also to Dr. W. D. Exton, committee, 1957, and coopted member Professor D. Gordon, 1958.

Three members are now councillors, Dr. E. W. Abrahams, Professor D. Gordon and Dr. K. S. Mowatt, and we congratulate them on their election: a representation of considerable help to us.

The British Medical Association Council has tolerated our agitations in good humour, and we thank them for their tolerance. Thanks are also due to the British Medical Association staff for cheerful clerical assistance.

Finally, could you encourage members to join and could you let us know what are your problems? An initial ten shillings (10s.) subscription is all that is now required.

E. W. ABRAHAMS,
President.

General Practitioner Group (British Medical Association).

The Group showed very little activity this year, responding only to the Branch Council's invitations to convocation, and covening a meeting of metropolitan general practitioners to consider a proposal by the Minister for Health (Dr. H. W. Noble) to introduce sub-intermediate beds in government hospitals.

The perennial subject of members' apathy, shared by all professional groups, has been in part responsible for the Committee's vacation. We saw no reason to meet simply because a month had passed with no business presenting for discussion. In particular is noted the difficulty of persuading the Branch Council to accept the Group as being representative of even metropolitan general practitioners when we barely secure a quorum for annual general meetings. Possibly the fear of being coerced into the Committee is a deterrent. But for this, as well as the poor attendance of general practitioners at post-graduate functions, the general economy seems to be to blame.

With the need to provide night consulting hours for the convenience of our patients, the few "free" nights seem due to our families, and while someone else can go along, there is no need for the individual to attend. For the time being the Committee will struggle along.

J. K. FARNWORTH.
Honorary Secretary.

Affiliated Local Associations.

Bundaberg Local Medical Association.

Our local branch has completed another satisfactory year, although meetings have not been regularly held in the last six months.

We appreciate work done by lecturers of the Post-Graduate Medical Education Committee, and these lectures have been well attended.

The President is Dr. L. McKeon, and Honorary Secretary, Dr. L. S. Stark.

L. S. STARK,
Honorary Secretary.

Cairns Local Medical Association.

The year 1958-1959 has been a relatively unspectacular one with few formal occasions, but it may be regarded as one of consolidation, in that a number of business meetings were held to discuss matters of policy, and members have formulated opinions on matters of concern to the Branch in general and the Local Association in particular.

An active part was played by the Association in the third Branch Convocation.

The lectures of Dr. D. P. Sapsford and Dr. D. R. L. Hart were attended by record turn-outs of members, all of whom were greatly appreciative of the subject matter and manner of presentation by both speakers.

Our President is Dr. C. H. Mansfield and our present membership numbers twenty-one (21).

J. V. GOODMAN,
Honorary Secretary.

Gladstone and District Local Medical Association.

Eight meetings and one clinical evening were held throughout the year.

The Local Association entertained the Minister for Health and Home Affairs, the Honourable Dr. H. W. Noble, M.L.A., at a cocktail party and fork dinner on the occasion of his visit to Gladstone.

Several representations to the local authority have been made throughout the year with a view to effecting some improvement in several public health matters. Notwithstanding the adroitness with which these public bodies usually sidestep such suggestions, some changes have been made for the better. Two important aims which this Local Association hopes to implement are provision of sewerage and an effective mosquito eradication campaign.

The Local Association annual meeting in September was followed by the annual dinner, to which members' wives were invited.

The President is Dr. Walter Yum.

JOHN A. MCGREE,
Honorary Secretary.

Gympie Local Medical Association.

The office bearers of the Association are: President, Dr. L. M. Outridge; Honorary Secretary, Dr. S. E. Warriner; Honorary Treasurer, Dr. N. B. Wilmer. Membership of the Branch is twelve (12).

Dr. N. B. Wilmer was selected as delegate to the third Branch Convocation on April 11, 1959, and a meeting was held to discuss the agenda and the question of sub-intermediate beds.

At the second post-graduate meeting for 1958, the lecturers were: Dr. John Nye, "The Dyspepsias"; Dr. P. Evans, "Resuscitation". On April 10, 1959, Dr. Konrad Hirschfeld spoke on "Backache from the Medical and Surgical Aspects".

Concern was expressed *re* the Post-Graduate Committee's inadequate finance for the lecture scheme and the probable curtailment of the lecture programme for 1959, and a donation was forwarded.

An approach was made to the Australian Physiotherapy Association *re* the possibility of obtaining the services of a physiotherapist for Gympie—so far without success.

Clinical meetings were held in March, May and June; on this last occasion the clinical thunder was subdued by Dr. J. H. Henry's reminiscences of his recent sojourn overseas.

S. E. WARRINER,
Honorary Secretary.

Innisfail Local Medical Association.

The President of the Association is Dr. W. N. Markwell, and Honorary Secretary, Dr. John G. Bulman.

The members of this branch have greatly appreciated and enjoyed the visits of post-graduate lecturers from Brisbane arranged by the Post-Graduate Medical Education Committee.

The year has been an uneventful one. There have been no changes in the branch membership apart from the resignation of our former Honorary Secretary, Dr. A. G. Taylor, who left the district in November, 1958.

JOHN G. BULMAN,
Honorary Secretary.

Ipswich and West Moreton Local Medical Association.

The year ended June 30, 1959, has been quite a successful one for the Ipswich and West Moreton Branch of the British Medical Association. Ten meetings were held during the year, at six of which we were fortunate to have lecturers supplied by the Post-Graduate Medical Education Committee. Their lectures are always popular and waited for with anticipation.

The J. A. Cameron Memorial Lecture was delivered in July, 1958, by Sir Kenneth Fraser, his subject being "The Romance of Pædiatrics". There was a good attendance from the Local Association, and many visitors were present from

Brisbane and country centres. The lecture, delivered in the Great Hall of the Ipswich Grammar School, was enjoyed by all.

Two clinical meetings and the annual meeting completed the rest of the year's activities.

Dr. J. F. Howes is President of the Local Association, which has a membership of forty-one (41).

I. J. McKELVIE,
Honorary Secretary.

Mackay Local Medical Association.

The Mackay Local Medical Association has just concluded a most active and successful year. Highlight of the year was the third North Queensland Medical Conference, held in Mackay in September, 1958. Office bearers are: President, Dr. Paul Hopkins; Honorary Secretary, Dr. E. H. Brown.

The Association continues to hold regular quarterly business meetings. At one of these Dr. S. C. Williams presented a paper on "Sub-Maxillary Calculi". For the March meeting, Pfizer's presented a number of medical films. The medical science group, under the direction of Dr. R. Courtice, meets each month, when recordings of visiting overseas lecturers are presented for discussion.

Post-Graduate Medical Education Committee lecturers for the year have been: Dr. B. Hirschfeld, "The Oral Treatment of Diabetes"; Dr. Marjory Warren and Miss Enid Warren, "The Rehabilitation of Geriatric Patients"; Dr. Grantley Stable, "Problems of the Neonatal Period".

Members of this Association have welcomed the opportunities to be represented at the British Medical Association Branch Convocations. We feel it gives us an opportunity to present our local conditions to the Council.

During the year, some of our members fostered the formation of the Mackay branch of the Queensland Society of Health. A further service to the community was the establishment of the Mackay Medical Emergency Service, to function at times of local disasters, e.g., aeroplane crashes, explosive accidents, cyclones and floods.

We have established a local medical library based on a donation of the library of the late Dr. R. Grant.

Two visits to the district by the British Medical Association President, Dr. S. A. McDonnell, were greatly enjoyed.

We now have a membership of twenty-two.

E. H. BROWN,
Honorary Secretary.

Maryborough Local Medical Association.

At the annual general meeting held on October 29, 1953, the following office bearers were elected: President, Dr. A. J. Kelly; Honorary Secretary-Treasurer, Dr. A. A. Kelly. There are at present ten (10) financial members of the Association. During the year Dr. A. A. Kelly represented the Local Association on the Spastic Welfare League.

Fluoridation of town water supply was discussed thoroughly at a special general meeting on April 2, 1959, and a recommendation made to the Council that a suitable fluoride salt should be added to the town supply as soon as possible, from the point of view of dental hygiene.

Sub-intermediate bed situation was discussed, and the matter was adjourned until something definite was being done in the district towards instituting the system. Most members spoke against the introduction of the system, and unanimously decided to support the views of the Brisbane Branch looking into the situation.

Dr. Konrad Hirschfeld gave an extremely informative and very enjoyable lecture on "Backache" on April 17, which was well attended. An enjoyable supper was had at the finish of the lecture, which enabled local members to get together and really get to know Dr. Hirschfeld.

A. A. KELLY,
Honorary Secretary.

Nambour and District Local Medical Association.

Now that contentious matters, in particular workers' compensation, seem to have slipped into the background, nothing exciting in the medico-political field has brought us together. Our activities have been confined to post-graduate meetings; we have three lectures per year and one post-graduate week-end.

The members are very happy with organization of the Branch Convocations, and feel that they are filling a long-wanted need.

Our President is Dr. J. C. Moffatt, and the Association has a membership of twenty (20).

A. S. RAINE,
Honorary Secretary.

Rockhampton Local Medical Association.

The major activity this year has been preparation for the North Queensland Medical Conference, to be held in Rockhampton in July, 1960. A great deal of work has been done, and we are convinced that the conference will be most successful.

A specially formed committee with an executive and sub-committees has been set up independently of the Local Association, and all members of the Association are in one committee or another.

Monthly clinical meetings have been held, and there has been improvement in attendances and vigour of discussion. The annual dinner has been the only social function of the year, but the opportunity was appreciated to entertain visiting lecturers throughout the year.

The Post-Graduate Medical Education Committee provided lecturers for the clinical week-end in the first half of the year, and a further lecturer for the second half. Visits were also received from the Director-General of Health, Dr. D. A. Dowling, the State Director-General of Health and Medical Services, Dr. A. Fryberg, accompanied by Dr. Marjory Warren and her sister, Miss Enid Warren. A recent visit by Dr. S. A. McDonnell, the State President, was greatly appreciated.

MERVYN R. GOLD,
Honorary Secretary.

South Burnett Local Medical Association.

This group has eleven members and meets every three months. Our most looked-forward-to events are the visits by post-graduate lecturers. During the last twelve months we have had visits from Dr. D. A. Henderson, Dr. N. E. Parker, Dr. N. S. Chalk and Dr. A. J. Foote. We are sincerely grateful to these gentlemen for giving us their time and the stimulus of their company. This opportunity for contact with people from the main centre in the State is much appreciated.

G. S. BRIGGS,
Honorary Secretary.

Toowoomba and District Local Medical Association.

Our office bearers for the past year have been as follows: President, Dr. E. S. P. Ferguson; Secretary-Treasurer, Dr. J. G. Dickson; Past President, Dr. R. A. McCullagh; President-Elect, Dr. F. E. Haddan. At our annual general meeting held recently, Dr. Haddan was elected President for the coming year, and Dr. Dickson was reelected Secretary. Dr. J. W. P. Henderson was elected President-Elect.

The highlight of the year's activities was our annual week-end post-graduate course followed by the annual dinner dance. The visiting lecturers and the cases presented provided a stimulating and thoroughly enjoyable week-end. We were only sorry that some of our distant colleagues from other branches could not attend.

We had two other post-graduate lectures during the early part of the year, which were very well attended, and we are grateful to the Post-Graduate Medical Education Committee for continuing to provide us with the opportunity of keeping abreast with recent developments.

As yet we have not provided any material for discussion at convocation, but have held general meetings to discuss the agenda of each and have sent two delegates to speak for us on both occasions.

A beautiful sunny day provided a pleasant backdrop to a cricket match, held as a result of a challenge by what turned out to be a supremely over-confident Pharmaceutical Society. Their utter defeat imbued us with confidence to make this an annual event.

Our ancient general hospital, first established ninety-six years ago, appears to be about to be replaced, and we eagerly await the coming year, hoping to play some part in its rebirth.

J. G. DICKSON,
Honorary Secretary.

Townsville Local Medical Association.

The Association held regular meetings during the year, with Dr. K. L. King in the chair. The Local Association now consists of thirty-one members and held eleven clinical meetings, most of which were arranged by members of the hospital staff, and three business meetings. In addition, lectures were presented by Dr. G. H. Moore, Dr. R. A. Douglas, Dr. Ian Dickson and Dr. N. R. Scott-Young. We were fortunate to be visited by two teams of post-graduate lecturers: Dr. Ruth Molphy, "Recent Advances in Anæsthetics"; Dr. D. A. Henderson, "Pyrexias of Unknown

Origin"; Dr. James Hart, "Ætiology of Sudden Blindness"; and Dr. D. P. Sapsford, "Surgery in Peripheral Vascular Disorders". Dr. J. M. Sutherland also visited us and gave us an interesting lecture on "Parkinsonism". Dr. Marjory Warren and Miss E. Warren, who were visiting Queensland from England, gave lectures on the practical and social aspects of geriatric problems. Members of the Local Association appreciated the high standard and value of these lectures.

The convocation in September was attended on our behalf by Dr. G. J. Douglas, and that in April by Dr. K. L. King and Dr. J. D. Ward.

The social activities during the year consisted of a dinner dance in October which was attended by a large number of members and their guests, and the annual dinner was held in June in the presence of the President of the Queensland Council, Dr. S. A. McDonnell.

We were honoured to be chosen as the first centre outside Brisbane for the monthly meeting of the Queensland Branch of the British Medical Association. At this meeting, with Dr. McDonnell as chairman, following a discussion of matters arising from the third Branch Convocation, Dr. K. J. J. Dorney gave an address on "Small Bowel Dyspepsia". The Local Association feel that this venture was most successful and gave members in Townsville and adjacent centres an opportunity to discuss with the President matters of interest to us.

JOHN WARD,
Honorary Secretary.

Western Downs Local Medical Association.

This Association was formed to include British Medical Association members in the town of Dalby and Shires of Wambo, Chinchilla and Tara, and has a membership of twelve (12).

The inaugural meeting was held on April 18, 1959. Office bearers elected were: President, Dr. A. M. Martell; Honorary Secretary, Dr. E. H. Cramond.

At the inaugural meeting, a post-graduate lecture was given by Dr. H. A. Copeman on the subject of "Nephritis".

The only other meeting held was a special meeting of Dalby members to discuss Red Cross Blood Bank activities in Dalby.

E. H. CRAMOND,
Honorary Secretary.

British Medical Agency of Queensland Pty. Ltd.

Directors: Dr. Norman Sherwood (chairman), Dr. B. N. Adsett, Dr. H. W. Horn, Dr. G. A. McLean, Dr. A. F. McSweeny, Dr. Robert Miller, Dr. L. J. J. Nye, Dr. J. G. Wagner.

The Agency occupies the major portion of the ground floor in B.M.A. House, from which it carries out its many activities. The display room provides scope for members to select instruments and equipment ex stock, and to provide a definite guide relating to prices and quality. The past year has seen an ever-increasing number of visitors to this expanding organization.

A Queensland distributing agency for Messrs. Allen and Hanburys (Australasia) Ltd. has been offered to, and accepted by the Agency, which will enhance business and prove of considerable convenience to doctors where parking facilities prove no problem.

An average number of transfers of city and country practices have been effected during the year. There are a number of doctors in nearby country centres desirous of selling their interests before the end of the current year. These are of solid foundation, the acquisition of which would prove an excellent start for enterprising practitioners.

The demand generally, for locums, far exceeds supply.

Inquiries continue to be received from members desiring partners or assistants, but to a lesser degree than in past years.

New developments during the year have involved the Agency in handling Medical Insurance Agency Limited, London, Personal Accident Insurance Scheme, and the Employed Medical and Associate Professions Assurance Fund.

With its accompanying added responsibility and obligations, administration of the M.A.P. Superannuation Fund has provided a wealth of interest.

The financial results for the six months to March 30, 1959, have exceeded all expectations. However, the benefits to be accrued by the Association will not be known until after the end of the financial year, September 30, 1959.

Members will like to be reminded that all revenue in excess of expenditure will ultimately be received by the Association.

NORMAN SHERWOOD,
Chairman of Directors.

Queensland Medical Finance Pty. Ltd.

Directors: Dr. Norman Sherwood (chairman), Dr. R. S. Cohen, Dr. H. W. Horn, Dr. G. A. McLean, Dr. A. F. McSweeny, Dr. L. J. J. Nye, Dr. D. P. Sapsford, Dr. J. G. Wagner.

During the year under review, eight medical practitioners have been assisted in the purchase of medical practices, partnerships or assistantships. Thirteen doctors have been in receipt of finance over such period.

Doctors desiring similar assistance, and provided that the British Medical Agency of Queensland Pty. Ltd. is acting as agent for the vendor or principal, are invited to address applications to the Secretary, Queensland Medical Finance Pty. Ltd., 88 L'Estrange Terrace, Kelvin Grove, Brisbane, W.1.

NORMAN SHERWOOD,
Chairman of Directors.

Medical and Associate Professions Superannuation Plan.

Founders: Dr. Norman Sherwood (chairman), Dr. G. C. H. Hogg, Dr. Alan E. Lee, Dr. L. J. J. Nye.

Trustees: Dr. J. G. Wagner (chairman), Dr. J. R. Adam, Dr. B. N. Adsett, Dr. A. D. Isles, Dr. Robert Miller.

The plan has progressed in accordance with aims originally envisaged. In fact, it may reasonably be stated that results in respect to revenue, capital appreciation and benefits to contributors exceed expectations.

Membership is 191.

The annual report, in which will be incorporated the founders' and trustees' report, together with full information of the plan's operations to June 30, 1959, will prove good reading for contributors, and enticing matter for perusal by self-employed professional persons throughout the Commonwealth who are contemplating investing in a plan operated entirely for its contributors at the lowest possible internal operational cost.

Copies of the report are available on application to the plan secretary, B.M.A. House.

The second annual general meeting is set down to be held at B.M.A. House on Tuesday, September 8, 1959, at 8 p.m.

NORMAN SHERWOOD,
Chairman of Founders.
J. G. WAGNER,
Chairman of Trustees.

Employed Medical and Associate Professions Assurance Fund.

Founder: Dr. Norman Sherwood.

Trustees: Dr. E. W. Abrahams, Professor D. Gordon, Dr. K. S. Mowatt.

The fund was established in December, 1959, and enrolments commenced in January, 1959.

The purposes of the fund are:

To make available, particularly to the younger men in the profession, high life assurance cover at a small premium cost.

To permit members in the M.A.P. Superannuation Plan to transfer their assurance interests in such plan to E.M.A.P. Assurance Fund without further medical examination, should they cease to remain self-employed.

To permit members in E.M.A.P. Assurance Fund to transfer to M.A.P. Superannuation Plan when they become self-employed and without further medical examination.

Membership is relatively small, but a steady flow of inquiries continues to be received.

DOUGLAS GORDON,
Chairman of Trustees.

Queensland Post-Graduate Medical Education Committee.

Representatives of the British Medical Association on the Post-Graduate Medical Education Committee for this year were: Dr. Alan E. Lee, Dr. L. A. Little, Dr. G. Anderson. When Dr. Lee resigned, the Council appointed Dr. C. E. Elliott, but as he was unable to attend meetings of the Committee, Dr. K. S. Mowatt was then appointed.

The activities of the Committee have continued along the lines established in previous years.

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION (INCORPORATED).

Revenue Account for Year ended June 30, 1959.

EXPENDITURE.	£ s. d.	£ s. d.
1959: June 30.		
To Branch Expenses	6,631 10 2	
„ Library Expenditure	414 18 7	
„ Depreciation of Equipment	215 17 6	
		7,262 6 3
„ Provision for Staff Superannuation		191 12 6
„ Federal Council: Capitation Fees		1,625 0 0
„ Post-Graduate Grant		500 0 0
„ Property Expenses	1,201 19 9	
Less Rents Received	919 18 0	
		282 1 9
„ Net Surplus for Year: Transferred to Accumulation Account		2,181 18 9
		£12,042 19 3

INCOME.	£ s. d.	£ s. d.
1959: June 30.		
By Branch Fund: Subscriptions		10,742 14 7
„ Portion of Journal Subscriptions: To be invested in Australasian Medical Publishing Co. Ltd., Sydney, Series "E" Debentures		646 0 0
		11,388 14 7
„ Interest:		
Australasian Medical Publishing Co. Ltd., Debentures and Funds held	296 3 7	
F. and A. Morton: Loan on Mortgage	117 12 0	
Southern Electric Authority Stock	3 10 0	
		417 5 7
„ General—		
Proceeds Clerical Assistance Directors' Fees: Yorkshire Insurance Co. Ltd.	208 0 0	
	25 0 0	
Sale of Diet Sheets and Sundry Income	3 19 1	
		236 19 1
		£12,042 19 3

Continuing its policy of holding post-graduate week-end refresher courses at the larger country centres, such courses were held at Toowoomba, Rockhampton, Bundaberg and Nambour.

During the year under review, sixteen country centres were visited by forty-eight lecturers, and the chairman and two lecturers participated in the North Queensland Medical Conference held at Mackay in September, 1958.

The majority of centres have expressed sincere appreciation of the visits arranged.

Overseas Lecturers: The following overseas visitors have lectured in Brisbane under the auspices of the Post-Graduate Committee: Professor Charles Illingworth, Glasgow, Dr. Alice Stewart, Oxford; Professor F. A. R. Stammers, Birmingham; Professor Jorgen Lovset, Bergen; Professor Andrew C. Ivy, Illinois; Dr. Marjory Warren, London; Professor W. Mushin, Cardiff; Professor Alan Johnstone, Leeds; Dr. L. T. Hilliard, London; Professor R. Farquharson, Toronto; Professor Robert Kark, San Francisco.

Meehan Memorial Lecture: Mr. John Hoets, of Sydney, delivered the 1958 Meehan Memorial Lecture on November 28, 1958, entitled "Smith-Petersen: The Man and His Work". This lecture was arranged in conjunction with the Queensland Regional Committee of the Australian Orthopædic Association.

Courses: Weekly lectures in advanced medicine were held throughout the academic year, and proved popular with general practitioners as well as post-graduate students. Lectures in advanced surgery were held during the second half of the year, the average attendance being six.

Post-Graduate Refresher Course: This course was again staged in 1958, after being allowed to lapse in 1957, and the date changed to October, to avoid clashing with Show Week, but in spite of this and of the participation of two notable visiting lecturers—Professor Stammers and Professor Jorgen Lovset—attendances were very disappointing. (Only four country practitioners attended the course.)

The Committee fulfils many varied functions in relation to post-graduate work. Included in these activities, twenty-five practitioners have been assisted in arranging their proposed post-graduate studies overseas, and reports of their successes are gratifying to the Committee. The Committee was also able to help seven Queensland doctors to obtain ships' surgeoncies.

The British Post-Graduate Federation and the Commonwealth Medical Advisory Bureau have been of invaluable assistance to the Committee in arranging post-graduate study abroad, and the close liaison, as in the past, has been maintained.

The Committee was represented at two general meetings of the Australian Post-Graduate Federation, and at the annual general meeting by Sir Alexander Murphy.

Nicholas Pty. Ltd. generously continued to make available to the Queensland Committee microgroove recordings (with relevant slides) of selected lectures by visiting overseas lecturers, and there appears to be an increasing demand for them by country centres and isolated practitioners.

The Committee extends sincere thanks to lecturers who have participated in visiting country centres, and to the many lecturers who have willingly given their services in an honorary capacity in both the advanced medicine and advanced surgery courses, and looks forward to their continued cooperation.

In addition, the Committee wishes to express its gratitude to the Brisbane and South Coast Hospitals Board for its generosity in making available the Hospital Flat for the accommodation of visiting lecturers.

Finally, thanks go to the British Medical Association for support and assistance throughout the year, and the publication of the post-graduate notice in the monthly circular, and to the staff of the British Medical Association for their ready assistance at all times, which is deeply appreciated by the Post-Graduate Committee.

L. I. McGUIRE,
Director, Post-Graduate Studies.

The Third North Queensland Medical Conference.

The following report has been submitted by the Honorary Secretary of the Mackay Local Medical Association.

The main activity of the Mackay Local Medical Association in 1958 was the organization of the third North Queensland Medical Conference.

Previous conferences, at Townsville in 1954 and at Cairns in 1956, had placed this conference on a firm footing. Organization for the 1958 conference commenced immediately after the Townsville conference.

The office bearers were: Patron, Dr. C. E. Williams; Conference President, Dr. P. W. Hopkins; Honorary Secretary, Dr. I. Chenoweth; Honorary Treasurer, Dr. S. C. Williams.

A full and comprehensive academic programme was presented to the eighty-eight visitors and twenty-two local members of the conference. Visiting members came from all parts of the eastern States.

One of the main features was a symposium on "The Effects of Irradiation". Dr. Alice Stewart from England was the principal guest speaker. Her visit was made possible by the generosity of many drug firms. Subsequently the Australasian Federation of Post-Graduate Studies took advantage of her presence in Australia, and further meetings were organized in Australia and New Zealand to allow her to be heard by a much wider medical audience.

The academic programme was arranged by an academic subcommittee consisting of Dr. R. Courtice and Dr. Cook Ruffle.

A rather full social programme was available, organized by Dr. Ted Brown and Dr. Duncan Robertson, despite which the attendances at the academic sessions were most gratifying.

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION (INCORPORATED).

Balance Sheet as at June 30, 1959.

	£ s. d.	£ s. d.
FIXED LIABILITIES:		
Loans from Queensland Medical Land Investment Co. Ltd.—		
Interest Free £4,650 0 0		
At 3% per annum .. £2,901 15 0		7,551 15 0
CURRENT LIABILITIES:		
Provision for Superannuation ..	311 12 6	
Property Suspense Account	*140 0 0*	
Medical Students' Loan Fund ..	10 6	
Library Fund—Contributions—Returned Medical Officers' Association	155 12 1	
Library—Deposit on Books	17 0 0	
Subscriptions for Remittance to—		
World Medical Association £92 10 6		
British Medical Association, London £82 13 6		
Australasian Medical Publishing Co. Ltd., Sydney .. £51 7 6		
	226 11 6	851 6 7
ASSOCIATION FUNDS:		
Accumulation Fund—		
Balance at July 1, 1958 .. .. .. £36,288 4 10		
Add Surplus for year as per Revenue Account £2,181 18 9	38,470 3 7	
Building Fund—		
Contributions	6,022 4 0	44,492 7 7
		£52,895 9 2

	£ s. d.	£ s. d.
FIXED ASSETS (at cost, less depreciation):		
Land and Buildings—at cost—		
Herston Property—		
B.M.A. House .. £32,672 8 3		
97 Herston Road .. *£2,941 9 6*	35,613 17 9	
Typewriters, Book-cases, Balopticon and Furniture	1,429 12 4	
Floor Coverings and Household Equipment	367 2 0	
Gestetner Duplicator	114 17 8	
Refrigeration Installation	48 1 3	
Motor Mower and Garden Tools ..	44 19 1	
Fire Alarm System	24 4 4	
Bancroft Medals and Collar—at cost	3 3 0	
Library—at valuation	150 0 0	37,795 17 5
Loan on Mortgage—Re Sale of House Property—F. Morton ..		1,480 0 0
		39,275 17 5
INVESTMENTS:		
Queensland Medical Land Investment Co. Ltd.—5,950 shares of £1 each paid to 10s. each at cost	*2,975 0 0*	
British Medical Agency of Queensland Pty. Ltd.—3,000 shares of £1 *each fully paid at cost*	*3,000 0 0*	
Australasian Medical Publishing Co. Ltd., Sydney—		
6½% Series "C" Debentures at cost £50 0 0		
6½% Series "D" Debentures at cost £5 0 0		
6½% Series "E" Debentures at cost £5,100 0 0		
Advance not yet *converted to Debentures* £648 14 6	5,803 14 6	
Southern Electric Authority of *Queensland—£100 V.I. Stock, at* cost	115 9 4	11,894 3 10
CURRENT ASSETS:		
English, Scottish and Australian Bank Ltd.	1,584 7 11	
British Medical Agency of Queensland Pty. Ltd.	*116 0 0*	
Cash on Hand	25 0 0	1,725 7 11
		£52,895 9 2

NOTE: A Mortgage covering the Freehold Lands of the Association is held by the English, Scottish and Australian Bank Ltd., to secure future advances.

AUDITORS' REPORT.

We have compared the above Balance Sheet with the books, accounts and vouchers of the Queensland Branch of the British Medical Association (Incorporated), and have obtained all the information and explanations we have required.

In our opinion, the Balance Sheet is properly drawn up to exhibit a true and correct view of the state of the Association's affairs as at June 30, 1959, according to the best of our information and explanations given to us, and as shown by the books of the Association.

The Register of Members and other records which the Company is required to keep by the Companies Acts of 1931-1955, or by its Articles, have, in our opinion, been properly kept.

GROOM, SANDERSON AND CO., Chartered Accountants,
Auditors.

(Sgd.) D. P. SAPSFORD,
Hon. Treasurer.

Brisbane,
August 13, 1959.

Accommodation was on the whole very satisfying. Considerable time had to be devoted to this by Dr. D. O'Loughlin, due to the unavoidable changes in the list of conference registrants.

The guests of honour included Sir Alexander Murphy, who so ably delivered a most inspiring inaugural address. At this function, to which the citizens of Mackay were invited, Mackay saw its first academic procession in all its brilliance of colour.

Although a medical conference in a country centre represents a tremendous amount of work by the doctors, their wives and ancillary helpers, the Mackay Local Association feels that it is well worth the effort. As well as cementing cordial relations amongst our colleagues, and also with the drug houses, it gives an opportunity for the presentation of "post-graduate work" to the country practitioners.

We were greatly helped by many drug and medical appliance firms, who made substantial donations of money, and who presented a most comprehensive trade exhibit.

We are also most grateful to the civic leaders and citizens of Mackay, who left no stone unturned in their efforts to welcome the visiting doctors and their families and to make their stay enjoyable.

We are happy in the knowledge that it was a most successful conference, and wish success, and heartily recommend support, to the fourth North Queensland Medical Conference, to be held in Rockhampton from July 24 to 30, 1960.

Social.

The annual fork dinner, held at 29 Murray Street, Wilston, on August 29, 1958, was attended by some 260 members and

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION (INCORPORATED).

GENERAL FUND.

Statement of Receipts and Payments for Twelve Months ended June 30, 1959.

RECEIPTS.	£ s. d.	£ s. d.
1958: July 1.		
To Funds at credit:		
E.S. and A. Bank Ltd.	740 13 10	
Cash on Hand	25 0 0	
		765 13 10
1959: June 30.		
To Subscriptions:		
Queensland Branch Subscriptions	10,742 14 7	
For remittance to British Medical Association, London	2,157 6 6	
For remittance re Medical Journal	1,334 14 9	
World Medical Association	92 10 6	
		14,327 6 4
„ Amounts received on behalf of Medical Students' Loan Fund		171 10 0
„ General:		
Property Suspense	*140 0 0*	
Building Fund Subscriptions	177 7 6	
Rents Received £425 18 0		
Amounts received from British Medical Agency on account of Rent, Cleaning and Clerical Assistance £700 0 0		
	1,125 18 0	
Australasian Medical Publishing Co. Ltd.:		
Interest on Funds held *£14 12 4*		
Interest on Debentures £231 11 3		
	296 3 7	
Interest on Mortgage Loan: F. Morton	117 12 0	
Southern Electric Authority of *Queensland: Interest on V.I.* Stock	3 10 0	
Directors' Fees: Yorkshire *Insurance Co. Ltd.*	*25 0 0*	
Proceeds sale of Book-cases	40 0 0	
F. Morton: Mortgage Repayments, Bartley Street Property	720 0 0	
Deposit on Library Books	*17 0 0*	
Sale of Diet Sheets and Sundry Income	3 19 1	
		2,666 10 2
		£17,931 0 4

PAYMENTS.	£ s. d.	£ s. d.
1959: June 30.		
By Amounts remitted on account of Subscriptions collected to:		
British Medical Association, London	*2,140 14 3*	
Australasian Medical Publishing Ltd., Sydney:		
Publication of Journals	*685 15 0*	
To be applied to purchase of Series "E" Debentures	646 0 0	
World Medical Association	144 16 6	
		3,617 5 9
„ Federal Council: Capitation Fees		1,625 0 0
„ Medical Students Loan Fund:		
Transfer of amount held at June 30, 1958	242 19 6	
Remittances in respect of *collections during year ended June 30,* 1959	170 19 6	
		413 19 0
„ Branch Expenses:		
Convocation Expenses, including Travelling Expenses	433 3 3	
Salaries, Audit and Honoraria	4,325 0 9	
Printing and Stationery	*518 11 5*	
Postages and Duty Stamps	415 18 9	
Social Functions	62 6 9	
Travelling Expenses	177 6 9	
Interest:		
E.S. and A. Bank Ltd. £48 15 8		
Aust. Med. Land Invest. Co. Ltd. £87 0 4		
	135 16 0	
Bank Charges, Insurance and Sundries	*54 18 7*	
Repairs to Furniture and Office Equipment	29 14 11	
Light and Gas	*148 2 7*	
Telephone	89 15 10	
Legal Expenses	84 2 0	
Council and General Meeting Expenses	*113 8 1*	
		6,588 5 8
„ Property Expenses:		
Rates	*379 16 8*	
Cleaning and Gardening	735 10 2	
State Land Tax	84 8 2	
Repairs and Maintenance	81 11 6	
Insurance	*68 5 3*	
Valuation Fee	8 8 0	
		1,357 19 9
„ *General:*		
Rebuilding Driveway	1,583 3 0	
Purchase of S.E.A.Q. Stock	115 9 4	
Post-Graduate Grant	500 0 0	
Purchase of *Furniture and Equipment*	92 10 0	
Petty Cash reimbursement *accrued June 30, 1958*	*13 1 4*	
Library Expenditure	414 18 7	
		2,719 2 3
„ Balance at credit:		
E.S. and A. Bank *Ltd.*	*1,584 7 11*	
Cash on Hand	25 0 0	
		1,609 7 11
		£17,931 0 4

guests, and was once again a most successful and enjoyable function.

On March 16, 1959, members of Council gave a cocktail party at B.M.A. House in honour of Dr. Ian Grant, of Glasgow, who was visiting Brisbane in the course of a tour of Australia and New Zealand. Dr. Grant is a vice-president of the Parent Body, and is also President of the English College of General Practitioners.

Golf Match.

The annual golf match between members of the Australian Dental Association and the British Medical Association took place at the Indooroopilly Golf Links on September 14, 1958, and resulted in a win for the B.M.A., who thus retained the Phillips Cup.

Congratulations.

During the year various honours were conferred upon members of the Branch, who are to be congratulated: Dr. Peter Roylance Delamothe, who was made an Officer of the Order of the British Empire; Dr. Joseph Andrew Arratta, who was made a Member of the Order of the British Empire; Dr. Frederick George Christensen, who was awarded the Shorney Prize for 1958.

Conclusion.

This past year has been one of many activities. The long-standing dispute with the Commissioner of the State Government Insurance Office was brought to a satisfactory conclusion, and it is to be hoped that harmonious relations will continue to prevail.

The contentious subject of sub-intermediate beds, proposed by the Honourable the Minister for Health, was discussed at two very largely attended meetings, at the second of which country Local Associations were represented. At both meetings an overwhelming majority rejected the proposals. So as far as the general body of the profession is concerned, the matter is finalized.

An innovation has been introduced, by holding some of the monthly scientific meetings outside Brisbane. The first was held at Townsville on June 5, 1959, and proved eminently successful. Another will be held at Toowoomba on August 7, and it is hoped will be equally successful. I feel that these meetings serve a very good purpose in keeping the country in touch with headquarters, and would like to see more metropolitan members attend them. It is to be hoped that this policy will continue for the future. I would like to thank Townsville members for their hospitality to me personally. In the course of my visit to Townsville I also met members at Mackay and Rockhampton, where I was most hospitably received.

Convocations have been held twice this year, and continue, I think, to give satisfaction. They have had good representation from the Groups and Associations, and have given members an opportunity for constructive and destructive criticism.

Many deputations have waited on the Premier, Treasurer and Minister for Health and Home Affairs on a wide variety of subjects. In all cases, we have been received courteously and given a good hearing. I would like to thank them for the opportunities they have given us to discuss our difficulties and troubles with them.

The Salaried Medical Officers' Group has been very active, and Council has tried to work in with them so as to try and remedy some of their many troubles and difficulties.

New by-laws are being presented to the annual meeting. Much time and thought have gone into their preparation. The changing conditions of medical practice have made alterations and additions very necessary.

The *Newsbulletin* is now coming out in a new format. I think everyone will agree it is a distinct improvement. It is easier to read and is in conformity with the policy of the other States.

Negotiations are proceeding for the erection of a permanent memorial to Dr. Joseph Bancroft, at Deception Bay, where he had his home. It is fitting that the memory of such a famous man should be perpetuated by us.

At the termination of my year of office, I would like to express my deep appreciation of the privilege conferred on me. It has been an extremely interesting year. I have thoroughly enjoyed doing what little I could for the Association.

To all members of Council I would extend my thanks for their hard work, unswerving interest and loyalty. This report would not be complete without expressing sincere appreciation of the B.M.A. staff for their work and loyal support during the year. Particular reference should be made to the Secretary, Mr. C. C. Jenkins, and his cheerful and capable "offsider", Miss Joy Finch.

To my very good friend and successor, Dr. Paul Hopkins, I wish every happiness in his year of office.

S. A. McDONNELL,
President.

BALANCE SHEET AND FINANCIAL STATEMENT.

The balance sheet and financial statement for the year ended June 30, 1959, and the auditors' report were presented by the Honorary Treasurer, Dr. D. P. Sapsford, and adopted.

OFFICE-BEARERS AND COUNCILLORS.

It was announced that the following members had been elected office-bearers and councillors for the year 1959-1960:

President: Dr. Paul W. Hopkins.

Past President: Dr. S. A. McDonnell.

President-Elect: Dr. P. A. Earnshaw.

Honorary Secretary: Dr. John Lee.

Councillors Elected in 1959: Dr. B. N. Adsett, Dr. N. C. Davis, Professor D. Gordon, Dr. L. A. Little, Dr. I. G. McPhee, Dr. Charles Roe.

Councillors Elected in 1958 for Two Years: Dr. E. W. Abrahams, Dr. J. R. Adam, Dr. G. R. Anderson, Dr. Robert Miller, Dr. K. S. Mowatt, Dr. H. S. Patterson, Dr. D. P. Sapsford.

ELECTION OF VICE-PRESIDENT.

The President read Article 55 of the Memorandum and Articles of Association of the Branch and announced that, in accordance with the power granted by this Article, the Council had unanimously resolved to nominate Dr. H. W. Horn for election to the office of Vice-President of the Branch, in recognition of his long and faithful service to the Association. The meeting then carried unanimously a motion that Dr. H. W. Horn be elected Vice-President of the Branch.

ETHICS COMMITTEE.

The following members were reelected to the Ethics Committee of the Branch for the year 1959-1960: Sir Alexander Murphy, Dr. B. L. W. Clarke, Dr. F. W. R. Lukin, Dr. L. J. J. Nye, Dr. J. J. Power, Dr. N. L. Sherwood, Dr. W. H. Steel.

AUDITORS.

Messrs. Groom, Sanderson and Company, Chartered Accountants (Aust.), were reelected auditors for the ensuing year.

ADJOURNMENT.

The meeting then adjourned until 8.30 p.m., when it was resumed in the Main Hall of the University of Queensland, St. Lucia, in the presence of His Excellency the Governor of Queensland, as well as guests and members.

ADDRESS BY HIS EXCELLENCY THE GOVERNOR.

His Excellency the Governor, Colonel Sir Henry Abel Smith, K.C.V.O., D.S.O., then addressed the meeting and paid tribute to the prominent part played by the medical profession during the first 100 years of Queensland's existence as a separate State.

MEMORIAL ROLL.

The immediate Past President, Dr. L. A. Little, read the Memorial Roll of members of the Queensland Branch of the British Medical Association, all present standing.

PRESENTATION OF PRIZES.

The following prizes, awarded on the recommendation of the Faculty of Medicine of the University of Queensland, were presented:

Memorial Prize of the Queensland Branch of the British Medical Association: Dr. Iris Maureen Duke.

Harold Plant Memorial Prize: Dr. Alan Harold Waters.

ADDRESS BY THE HONOURABLE D. A. CAMERON.

The Honourable D. A. Cameron, O.B.E., Commonwealth Minister for Health, delivered an address in which he drew attention to the effect which the progress of modern society had had on the original simple doctor-patient relationship. He referred to the tremendous advances in medicine and to the development of modern techniques and drugs, the cost of which made assistance from public funds imperative. He stressed the need to maintain the right of the individual to choose his own doctor, and of the doctor to be able to treat his patient in the way he thought best.

INDUCTION OF PRESIDENT.

The retiring President introduced the incoming President, Dr. Paul W. Hopkins, and installed him in the presidential chair.

PRESIDENT'S ADDRESS.

The incoming President, Dr. Paul W. Hopkins, delivered his presidential address (see page 233).

Post-Graduate Work.

THE MELBOURNE MEDICAL POST-GRADUATE COMMITTEE.

PROGRAMME FOR MARCH, 1960.

THE Melbourne Medical Post-Graduate Committee announces the following programme for March, 1960.

Pathology.

A course in basic pathology, practical classes followed by lectures, will commence at the University of Melbourne on March 7 and continue on Mondays and Wednesdays till June 29, from 1.30 p.m. till 3.30 p.m. This is suitable for candidates for the M.D. degree and medical diplomas. The fee is twenty guineas, and applications for enrolment, on the special form, should be sent to the Committee by February 22.

Physics.

A course in physics will commence at the Commonwealth X-ray and Radium Laboratory on Thursday, March 3, at 4.30 p.m. and will continue for 18 weeks. The fee is

twenty guineas, and applications for enrolment should be sent to the Committee by February 18. This course will be suitable for candidates for the D.D.R. and D.C.R.A.

Anatomy and Physiology.

Courses for Part I of higher degrees and diplomas and for Fellowship candidates, which commenced in February, will continue throughout March on Mondays and Wednesdays.

Psychiatry.

The Australasian Association of Psychiatrists will conduct a course in psychiatry at 8 p.m. on Tuesdays and Wednesdays, commencing on March 15. The first lectures will be held at the Royal Children's Hospital, after which the class will move to various other centres, continuing for 24 weeks. In addition to this series of lectures, there will be opportunity for members of the class, by arrangement, for group therapy, individual therapy and group discussions; also for attendance at psychiatric departments of general hospitals and at the Department of Mental Hygiene. A course will be arranged in neuropathology, and there will be demonstrations of neuropsychiatric diagnostic investigations. The fee for the course in psychiatry is fifteen guineas, and enrolment should be made through the Committee by March 1.

Medicine.

The Honorary Medical Staff at the Royal Melbourne Hospital will conduct a full-time course in medicine, commencing on June 6 and continuing daily for eight weeks. The fee is thirty guineas, and applications for enrolment should be sent to the Committee by May 23. The course is designed for candidates for the M.D. Part II and M.R.A.C.P. examinations.

Application for Courses.

Candidates interested in a course in radiodiagnosis commencing in late April or early May, or in a course in physics for the D.T.R. Part II or D.C.R.A. in radiotherapy, or else in courses for D.L.O. Part II, are asked to get into touch with the Committee as soon as possible.

Country Courses.

Mooroopna.—On Saturday, March 19, the Committee will conduct the following course at the Mooroopna Base Hospital: 2.30 p.m., "Cardiac Surgery', Mr. K. N. Morris; 4.15 p.m., "Endocrine Disorders", Dr. H. N. B. Wettenhall; 5.15 p.m., "Management of Urinary Tract Infections, Mr. A. B. Alder. The fee for this course is 15s., but those who have paid an annual subscription to the Committee are invited without further charge.

Flinders Naval Depot.

On Wednesday, March 16, at Flinders Naval Depot, at 2.30 p.m., Dr. Robert Kelly will speak on "Common Skin Diseases". This lecture is given by arrangement with the Royal Australian Navy.

Overseas Lecturers.

Professor L. A. Osborn, Professor of Psychiatry, University of Wisconsin, U.S.A., will lecture on "Trends in Modern Medicine" at 8.15 p.m. on Thursday, March 1, in the Medical Society Hall. He will also show a film on the Wisconsin Diagnostic Centre.

Professor John McMichael, Sims Commonwealth Travelling Professor for 1960, will speak on "Emphysema' at 8.15 p.m. on Thursday, March 31, in the Medical Society Hall.

There is no fee for either of these lectures, and all members of the medical profession are invited.

FORWARD DATES.

On April 2, a symposium on "Cancer of the Stomach" will be held in the Public Lecture Theatre.

On May 16 to 20, a refresher course in general medicine and surgery will be held at the Alfred Hospital.

INFORMATION.

The address of the Melbourne Medical Post-Graduate Committee is 394 Albert Street, East Melbourne. Telephone: FB 2547.

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED JANUARY 9, 1960.[1]

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Australian Capital Territory.[2]	Australia.[2]
Acute Rheumatism	..	4(1)	5(1)	..	..	..	..	..	9
Amœbiasis	..	..	..	..	..	..	..	..	..
Ancylostomiasis	..	..	..	..	..	..	5	..	5
Anthrax	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..
Brucellosis	1	..	..	..	..	..	..	..	1
Cholera	..	..	..	..	..	..	..	..	..
Chorea (St. Vitus)	..	..	..	..	..	..	..	..	..
Dengue	..	..	..	..	..	..	..	..	..
Diarrhœa (Infantile)	5(5)	12(8)	1(1)	..	..	..	..	..	18
Diphtheria	..	..	1	..	..	..	..	..	1
Dysentery (Bacillary)	..	3(2)	2(2)	..	..	..	..	..	5
Encephalitis	1	..	..	2(2)	..	..	..	..	3
Filariasis	..	..	..	..	..	..	..	..	..
Homologous Serum Jaundice	..	..	..	..	..	..	..	..	..
Hydatid	..	1	..	..	..	..	..	..	1
Infective Hepatitis	91(41)	52(36)	21(9)	13(9)	..	..	..	..	177
Lead Poisoning	..	..	1(1)	..	..	..	..	..	1
Leprosy	..	..	..	..	..	..	..	..	..
Leptospirosis	..	..	..	..	..	..	..	..	..
Malaria	..	..	1	..	..	..	..	..	1
Meningococcal Infection	1(1)	3(1)	..	..	..	1(1)	..	..	5
Ophthalmia	..	..	..	..	3	..	..	..	3
Ornithosis	..	..	..	..	..	..	..	..	..
Paratyphoid	..	..	..	..	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	..
Poliomyelitis	..	..	1	1(1)	..	..	..	..	2
Puerperal Fever	..	..	..	..	..	..	..	..	..
Rubella	..	9(6)	1	19(1)	..	..	..	..	29
Salmonella Infection	..	..	..	3(3)	2(2)	..	..	..	5
Scarlet Fever	7(2)	16(11)	2	1(1)	1(1)	1(1)	..	..	28
Smallpox	..	..	..	..	..	..	..	..	..
Tetanus	..	1	2(2)	..	..	..	..	..	3
Trachoma	..	..	..	..	..	..	14	..	14
Trichinosis	..	..	..	..	..	..	..	..	..
Tuberculosis	24(11)	23(18)	13(4)	4(4)	6(3)	2(2)	1	..	73
Typhoid Fever	..	..	..	..	..	..	..	..	..
Typhus (Flea-, Mite- and Tick-borne)	..	..	..	..	..	..	..	..	..
Typhus (Louse-borne)	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	..	..	..	..	..	..

[1] Figures in parentheses are those for the metropolitan area.

[2] Figures incomplete owing to absence of return from Australian Capital Territory.

SEMINARS AT ROYAL PRINCE ALFRED HOSPITAL.

SEMINARS will be held at the Royal Prince Alfred Hospital, Sydney, during 1960 on Fridays from 1.15 to 2.15 p.m., in the Scot Skirving Lecture Theatre. The programme from February 19 to July 1 is as follows:

February 19, Cardiology Section, "Diuresis and Diuretics", Professor R. B. Blacket. February 26, Thoracic Section, "Pulmonary Hydatid Disease", Dr. M. R. Joseph and Mr. Alex Grant.

March 4, Neurology Section, "Transmission in Trigeminal Nuclei", Dr. Darien Smith, Department of Physiology, University of Sydney, by invitation. March 11, Gastro-Enterology Section, "Gastro-Enterology Overseas", Dr. A. P. Skyring. March 18, Hæmatology Section, "Clinical Experiences with Hereditary Bleeding Disorders", Dr. C. B. Kerr. March 25, Radiology Section, "How Safe is Diagnostic Radiology?", Dr. A. R. Colwell and Dr. P. Larbalestier, by invitation.

April 1, Psychiatry Section, "Metabolic Madness", Professor W. H. Trethowan and Professor C. R. B. Blackburn. April 8, Renal Section, "Long-Term Treatment of the Nephrotic Syndrome", Dr. S. R. Reader. April 22, Endocrinology Section, "Cushing's Syndrome", Dr. K. S. Harrison and Dr. J. M. Greenaway. April 29, Pædiatric Section, subject to be announced later, Dr. Hattie Alexander, Johns Hopkins Hospital, Baltimore, U.S.A., by invitation.

May 6, "The Lungs in Heart Disease", Professor J. McMichael, Sims Travelling Professor, by invitation. May 13, Neurology Section, "Kuru—Recent Experiences in New Guinea", Dr. Leonard Rail. May 20, Cardiology Section, subject to be announced later, Dr. W. Brigden, National Heart Hospital, London, by invitation.

June 3, Hæmatology Section, "Myelofibrosis", Professor C. R. B. Blackburn and Dr. H. Kronenberg. June 10, Thoracic Section, "Tuberculosis Today—I", staff of the Page Chest Pavilion, Royal Prince Alfred Hospital. June 17, Thoracic Section, "Tuberculosis Today—II", Staff of the Page Chest Pavilion, Royal Prince Alfred Hospital. June 24, Cardiology Section, "Anginal Syndromes", Dr. J. Kempson Maddox.

July 1, Gastro-Enterology Section, "Report of a Tour", Dr. S. J. M. Goulston.

Each seminar will be followed by a clinico-pathological session at 2.15 p.m., by "unit rounds" at 3.30 p.m. and by "grand rounds" at 5 p.m.

Saturday morning special unit meetings are held in the following order each month: (i) Clinical Research Unit, (ii) Cardiac Clinic, (iii) Gastro-Enterology Unit, (iv) Thoracic Unit, (v) Endocrine Clinic.

Out of the Past.

A CURE FOR RHEUMATISM.

[From *The Sydney Morning Herald*, October 18, 1899.]

SEVERAL persons suffering from rheumatism have arrived at Eden en route for the Kiah whaling station, whither they are going for the purpose of the whale-bath cure. The treatment consists in the patient, divested of clothing, repeatedly remaining for a long time in the interior of the dead whale. Some remarkable cures are said to have been effected by this treatment.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Ng, Patrick Tat Wah, M.B., B.S., 1959 (Univ. Sydney), Canterbury District Memorial Hospital, Campsie.

Flynn, Gerald James, M.B., B.S., 1959 (Univ. Sydney), Mater Misericordiæ Hospital, Crow's Nest.

Deaths.

THE following deaths have been announced:

MACKENZIE.—John Keith Douglas Mackenzie, on January 31, 1960, at Melbourne.

SLATER.—Peter Reginald Slater, on January 31, 1960, at Bendigo.

Diary for the Month.

FEBRUARY 15.—Victorian Branch, B.M.A.: Finance Sub-committee.
FEBRUARY 16.—New South Wales Branch, B.M.A.: Medical Politics Committee.
FEBRUARY 18.—Victorian Branch, B.M.A.: Executive of Branch Council.
FEBRUARY 19.—New South Wales Branch, B.M.A.: Ethics Committee.
FEBRUARY 23.—New South Wales Branch, B.M.A.: Hospitals Committee.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Medical Secretary, 135 Macquarie Street, Sydney): All contract practice appointments in New South Wales.

South Australian Branch (Honorary Secretary, 80 Brougham Place, North Adelaide): All contract practice appointments in South Australia.

Editorial Notices.

ALL articles submitted for publication in this Journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations, other than those normally used by the Journal, and not to underline either words or phrases.

Authors of papers are asked to state for inclusion in the title their principal qualifications as well as their relevant appointment and/or the unit, hospital or department from which the paper comes.

References to articles and books should be carefully checked. In a reference to an article in a journal the following information should be given: surname of author, initials of author, year, full title of article, name of journal, volume, number of first page of article. In a reference to a book the following information should be given: surname of author, initials of author, year of publication, full title of book, publisher, place of publication, page number (where relevant). The abbreviations used for the titles of journals are those of the list known as "World Medical Periodicals" (published by the World Medical Association). If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors submitting illustrations are asked, if possible, to provide the originals (not photographic copies) of line drawings, graphs and diagrams, and prints from the original negatives of photomicrographs. Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary is stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2651-2-3.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this Journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such notification is received within one month.

SUBSCRIPTION RATES.—Medical students and others not receiving THE MEDICAL JOURNAL OF AUSTRALIA in virtue of membership of the Branches of the British Medical Association in Australia can become subscribers to the Journal by applying to the Manager or through the usual agents and booksellers. Subscriptions can commence at the beginning of any quarter and are renewable on December 31. The rate is £6 *per annum* within Australia and the British Commonwealth of Nations, and £7 10s. *per annum* within America and foreign countries, payable in advance.